

Unlock new business  
mode independently



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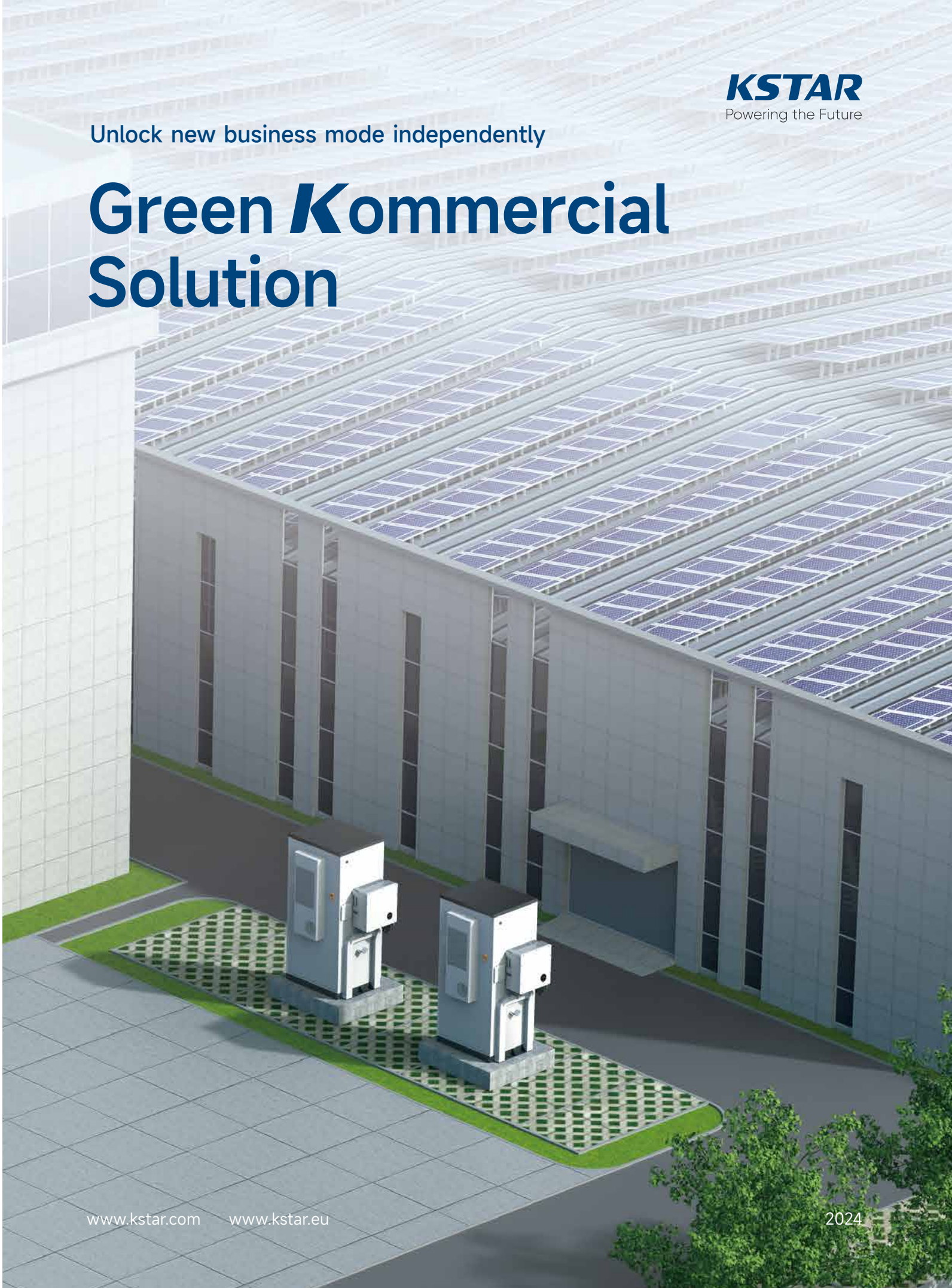


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Unlock new business mode independently

# Green *K*ommercial Solution



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2024

# ABOUT KSTAR

1993

KSTAR Established  
Enter Offline UPS Field

1996

Overseas Expansion  
Enter the European and US Market

1998

New Manufacturing Base  
Guanlan Industrial Park  
Inaugurated in Shenzhen

2004

Further Development  
Enter High-power Online UPS Field

2009

Enter New Energy Field  
1<sup>st</sup> PV Inverter Produced

2010

IPO and Public Debut  
Listed in Shenzhen Stock Exchange

2013

Explore New Opportunities  
Enter the Electric Vehicles Market

2015

National Certified Technology Center  
Certified by National Quality Management System

2019

CATL & KSTAR Partnership  
Establish Joint Venture Factory with CATL

2021

Further Invest in ESS Facilities  
Open Jiangxi Changxin Gold Sunshine Power Supply Co.,Ltd

2023

KSTAR Vietnam  
Vietnam Plant in Operation  
National-level Green Factory



# Unlock new business mode independently



180+

Countries & Regions

50GW

PV Installation

30+

Years History

KSTAR, a leading global new energy solution provider founded in 1993, excels in key solar markets world-wide. Our expertise spans the spectrum, delivering cutting-edge PV inverters and energy storage systems for residential, commercial & industrial, and large-scale utility needs.

Backed by 30+ years of experience in electrical and electronic technology, KSTAR is committed to superior new energy solutions for a diverse clientele in 180 countries and regions, with an impressive 50GW of KSTAR products already installed globally.

We are always generating superior solutions for energy and more. Let's power the future together.

# Thriving Three Decades: Your Superior **K**ommercial Partner

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# KSG Series

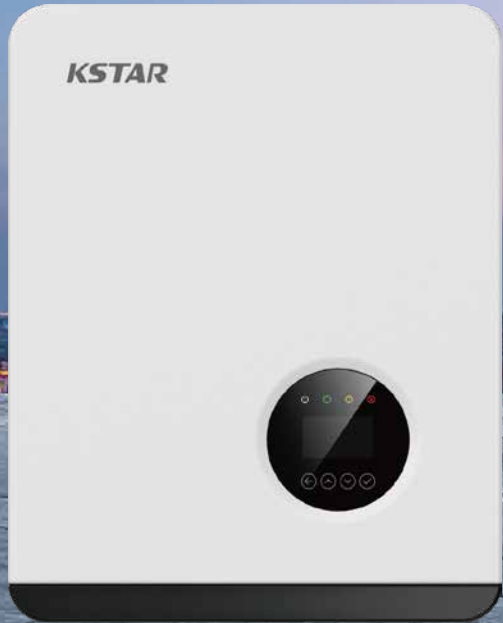
Three Phase / On-grid / 25-40 kW

 Max. PV Voltage up to 1100 V  
Type II DC / AC SPD

 Compatible for Big Capacity PV Panel  
WiFi / 4G Plug Optional

 DC / AC Ratio up to 1.5  
IP66 Protection

 High Efficiency up to 98.7%  
Smaller and Lighter



| MODEL                               | KSG-25KT-M1                                                                                                                                                                                                              |                    | KSG-30KT-M1        | KSG-40KT-M1 |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-------------|
| Input (DC)                          |                                                                                                                                                                                                                          |                    |                    |             |
| Max. DC Voltage                     | 1100 V                                                                                                                                                                                                                   |                    |                    |             |
| Nominal Voltage                     | 650 V                                                                                                                                                                                                                    |                    |                    |             |
| Start Voltage                       | 250 V                                                                                                                                                                                                                    |                    |                    |             |
| MPPT Voltage Range                  | 140 V ~ 1000 V                                                                                                                                                                                                           | 200 V ~ 1000 V     | 200 V ~ 1000 V     |             |
| Number of MPPT Tracker              | 2                                                                                                                                                                                                                        | 3                  | 3                  |             |
| Strings per MPPT Tracker            | 2                                                                                                                                                                                                                        |                    |                    |             |
| Max. input Current per MPPT         | 30 A                                                                                                                                                                                                                     |                    |                    |             |
| Max. Short-circuit Current per MPPT | 40 A                                                                                                                                                                                                                     |                    |                    |             |
| Output (AC)                         |                                                                                                                                                                                                                          |                    |                    |             |
| Nominal AC Output Power             | 25000 W                                                                                                                                                                                                                  | 30000 W            | 40000 W            |             |
| Max. AC Apparent Power              | 27500 VA                                                                                                                                                                                                                 | 33000 VA           | 44000 VA           |             |
| Nominal AC Voltage                  | 230 / 400 V, 3P+N+PE                                                                                                                                                                                                     |                    |                    |             |
| AC Grid Frequency Range             | 50 / 60 Hz (±5Hz)                                                                                                                                                                                                        |                    |                    |             |
| Max. Output Current                 | 39.9 A                                                                                                                                                                                                                   | 47.8 A             | 63.8 A             |             |
| Power Factor (cosΦ)                 | 0.8 leading - 0.8 lagging                                                                                                                                                                                                |                    |                    |             |
| THDi                                | 3%                                                                                                                                                                                                                       |                    |                    |             |
| Efficiency                          |                                                                                                                                                                                                                          |                    |                    |             |
| Max. Efficiency                     | 98.6%                                                                                                                                                                                                                    | 98.7%              | 98.7%              |             |
| Euro Efficiency                     | 98.3%                                                                                                                                                                                                                    | 98.4%              | 98.4%              |             |
| Protection Devices                  |                                                                                                                                                                                                                          |                    |                    |             |
| DC Switch                           | Yes                                                                                                                                                                                                                      |                    |                    |             |
| Output Over Current                 | Yes                                                                                                                                                                                                                      |                    |                    |             |
| Anti-islanding Protection           | Yes                                                                                                                                                                                                                      |                    |                    |             |
| DC Reverse Polarity Protection      | Yes                                                                                                                                                                                                                      |                    |                    |             |
| String Fault Detection              | Optional                                                                                                                                                                                                                 |                    |                    |             |
| DC / AC Surge Protection            | DC Type II; AC Type III; Type II Optional                                                                                                                                                                                |                    |                    |             |
| Insulation Detection                | Yes                                                                                                                                                                                                                      |                    |                    |             |
| AC Short Circuit Protection         | Yes                                                                                                                                                                                                                      |                    |                    |             |
| General Specifications              |                                                                                                                                                                                                                          |                    |                    |             |
| Dimensions (W x H x D)              | 380 x 483 x 193 mm                                                                                                                                                                                                       | 380 x 483 x 223 mm | 380 x 483 x 227 mm |             |
| Weight                              | 20.7 kg                                                                                                                                                                                                                  | 25.5 kg            | 32.5 kg            |             |
| Operating Temperature Range         | -25°C ~+ 60°C                                                                                                                                                                                                            |                    |                    |             |
| Cooling Type                        | Fan cooling                                                                                                                                                                                                              |                    |                    |             |
| Max. Operating Altitude             | 4000 m                                                                                                                                                                                                                   |                    |                    |             |
| Max. Operating Humidity             | 0 - 100% (No condensation)                                                                                                                                                                                               |                    |                    |             |
| AC Output Terminal Type             | Connector                                                                                                                                                                                                                |                    |                    |             |
| IP Class                            | IP66                                                                                                                                                                                                                     |                    |                    |             |
| Topology                            | Transformerless                                                                                                                                                                                                          |                    |                    |             |
| Communication                       | RS-485 / Wifi / 4G                                                                                                                                                                                                       |                    |                    |             |
| Display                             | LCD                                                                                                                                                                                                                      |                    |                    |             |
| Certification & Standard            | EN/IEC 62109-1/2; IEC/EN 61000-6-2; IEC/EN 61000-6-4; IEC 61683; IEC 60068; IEC 60529; IEC 62116; IEC 61727; EN 50549-1; AS 4777.2; VDE-AR-N-4105; VDE 0126-1-1; CEI-021; G 99; C10/11; NB/T 32004-2018; GB/T 19964-2012 |                    |                    |             |

# G Series

Three Phase / On-grid / 50–80 kW

- 

Max. PV Voltage up to 1100 V  
Type II DC / AC SPD
- 

Reactive Power Control  
WiFi / 4G Plug Optional
- 

DC / AC Ratio up to 1.5  
IP66 Protection
- 

High Efficiency up to 98.6%  
Smaller and Lighter



| MODEL                               | G50KT                                                                                                                                                                                                                 |          | G60KT    |          | G70KT | G80KT |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|-------|-------|
| Input (DC)                          |                                                                                                                                                                                                                       |          |          |          |       |       |
| Max. DC Voltage                     | 1100 V                                                                                                                                                                                                                |          |          |          |       |       |
| Nominal Voltage                     | 650 V                                                                                                                                                                                                                 |          |          |          |       |       |
| Start Voltage                       | 250 V                                                                                                                                                                                                                 |          |          |          |       |       |
| MPPT Voltage Range                  | 200 V ~ 1000 V                                                                                                                                                                                                        |          |          |          |       |       |
| Number of MPPT                      | 4                                                                                                                                                                                                                     |          |          |          |       |       |
| Strings per MPPT                    | 2                                                                                                                                                                                                                     | 2        | 3        | 3        |       |       |
| Max. input Current per MPPT         | 32 A                                                                                                                                                                                                                  | 32 A     | 45 A     | 45 A     |       |       |
| Max. Short-circuit Current per MPPT | 48 A                                                                                                                                                                                                                  | 48 A     | 60 A     | 60 A     |       |       |
| Output (AC)                         |                                                                                                                                                                                                                       |          |          |          |       |       |
| Nominal AC Output Power             | 50000 W                                                                                                                                                                                                               | 60000 W  | 70000 W  | 80000 W  |       |       |
| Max. AC Apparent Power              | 55000 VA                                                                                                                                                                                                              | 66000 VA | 77000 VA | 88000 VA |       |       |
| Nominal AC Voltage                  | 230 / 400 V, 3P+N+PE                                                                                                                                                                                                  |          |          |          |       |       |
| AC Grid Frequency Range             | 50 Hz / 60 Hz (±5Hz)                                                                                                                                                                                                  |          |          |          |       |       |
| Max. Output Current (@220V)         | 83.3 A                                                                                                                                                                                                                | 100 A    | 111.7 A  | 127.5 A  |       |       |
| Power Factor (cosΦ)                 | 0.8 leading - 0.8 lagging                                                                                                                                                                                             |          |          |          |       |       |
| THDi                                | 3%                                                                                                                                                                                                                    |          |          |          |       |       |
| Efficiency                          |                                                                                                                                                                                                                       |          |          |          |       |       |
| Max. Efficiency                     | 98.5%                                                                                                                                                                                                                 | 98.5%    | 98.6%    | 98.6%    |       |       |
| Euro Efficiency                     | 98.2%                                                                                                                                                                                                                 | 98.2%    | 98.3%    | 98.3%    |       |       |
| Protection Devices                  |                                                                                                                                                                                                                       |          |          |          |       |       |
| DC Switch                           | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| Output Over Current Protection      | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| Anti-islanding Protection           | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| DC Reverse Polarity Protection      | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| String Fault Detection              | Optional                                                                                                                                                                                                              |          |          |          |       |       |
| DC / AC Surge Protection            | Type II                                                                                                                                                                                                               |          |          |          |       |       |
| Residual Current Monitoring         | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| AC Short Circuit Protection         | Yes                                                                                                                                                                                                                   |          |          |          |       |       |
| General Specifications              |                                                                                                                                                                                                                       |          |          |          |       |       |
| Dimensions (W x H x D)              | 548 x 540 x 289 mm                                                                                                                                                                                                    |          |          |          |       |       |
| Weight                              | 51 kg                                                                                                                                                                                                                 | 51 kg    | 55 kg    | 55 kg    |       |       |
| Operating Temperature Range         | -25°C ~+ 60°C                                                                                                                                                                                                         |          |          |          |       |       |
| Cooling Type                        | Fan Cooling                                                                                                                                                                                                           |          |          |          |       |       |
| Max. Operating Altitude             | 4000 m                                                                                                                                                                                                                |          |          |          |       |       |
| Max. Operating Humidity             | 0 - 100% (No Condensation)                                                                                                                                                                                            |          |          |          |       |       |
| AC Output Terminal Type             | OT terminal                                                                                                                                                                                                           |          |          |          |       |       |
| IP Class                            | IP66                                                                                                                                                                                                                  |          |          |          |       |       |
| Topology                            | Transformerless                                                                                                                                                                                                       |          |          |          |       |       |
| Communication                       | RS-485 / Wifi / 4G                                                                                                                                                                                                    |          |          |          |       |       |
| Display                             | LCD                                                                                                                                                                                                                   |          |          |          |       |       |
| Certification & Standard            | EN/IEC 62109-1; EN/IEC 62109-2; IEC/EN 61000-6-1; IEC/EN 61000-6-3; IEC/EN 61000-6-2; IEC/EN 61000-6-4; IEC 61683; IEC 60068; IEC 60529; IEC 62116; IEC 61727; EN 50549-1; NC RfG; VDE-AR-N-4105; VDE 0126; CEI 0-21; |          |          |          |       |       |



# BlueKernel Series

NEW

Three Phase / On-grid / 125 kW

- Max. PV Voltage up to 1100 V  
Type II DC / AC SPD
- Compatible for Big Capacity PV Panel  
WiFi / 4G Plug Optional
- DC / AC Ratio up to 1.5  
IP66 Protection
- High Efficiency up to 98.7%  
Smaller and Lighter



| MODEL                               | G125KT7                        |
|-------------------------------------|--------------------------------|
| Input (DC)                          |                                |
| Max. DC Voltage                     | 1100 V                         |
| Max. Input Current per MPPT         | 40 A                           |
| Max. Short-circuit Current per MPPT | 60 A                           |
| Start Voltage                       | 350 V                          |
| MPPT Voltage Range                  | 200 V ~ 1000 V                 |
| Nominal Voltage                     | 650 V                          |
| Number of MPPT                      | 8                              |
| Strings per MPPT                    | 2                              |
| Output (AC)                         |                                |
| Nominal AC Output Power             | 125 kW                         |
| Max. AC Apparent Power              | 125 kVA                        |
| Nominal AC Voltage                  | 230 V / 400 V, 3W +PE, 3W+N+PE |
| AC Grid Frequency Range             | 50 / 60 Hz ±5Hz                |
| Max. Output Current                 | 181.2 A                        |
| Power Factor (cosΦ)                 | 0.8 leading - 0.8 lagging      |
| THDi                                | < 3% (Nominal Power)           |
| Efficiency                          |                                |
| Max. Efficiency                     | 98.7%                          |
| Euro Efficiency                     | 98.5%                          |
| Protection Devices                  |                                |
| DC Switch                           | Yes                            |
| Anti-islanding Protection           | Yes                            |
| Output Over Current Protection      | Yes                            |
| DC Reverse Polarity Protection      | Yes                            |
| String Fault Detection              | Optional                       |
| DC / AC Surge Protection            | DC Type II; AC Type II         |
| AC Short Circuit Protection         | Yes                            |
| AFCI Function                       | Optional                       |
| Night SVG Function                  | Optional                       |
| PID Recovery                        | Optional                       |
| Insulation Detection                | Yes                            |
| Residual Current Monitoring         | Yes                            |
| General Specifications              |                                |
| Dimensions (W x H x D)              | 965 x 700 x 355 mm             |
| Weight                              | 85 kg                          |
| Operating Temperature Range         | -30 ~ 60°C                     |
| Cooling Type                        | Fan Cooling                    |
| Max. Operation Altitude             | 5000 m (> 4000 m Derating)     |
| Max. Operating Humidity             | 0 ~ 100%                       |
| IP Class                            | IP66                           |
| Noise                               | ≤ 75 dB                        |
| Topology                            | Transformerless                |
| Communication                       | RS-485 / PLC / WIFI / 4G       |
| Display                             | LED, Buletooth + APP           |

\* For the latest certificate information, please contact KSTAR.

# BluePulse Series

KAC50DP-BC100DE

## Safe & Reliable

- ▶ CATL LFP Battery Cell
- ▶ Double Fire Suppression System Design
- ▶ 1+1 Redundancy Design

## Economical & Efficient

- ▶ Save CapEx, Expanding as Required
- ▶ Efficient and Energy-saving HVAC Design

## Simple & User-friendly

- ▶ Pre-installed in Factory for Easy Installation on site
- ▶ Integrated BMS/EMS, Suitable for Various Applications
- ▶ Effortless Operation, Cloud Control

### Outdoor Battery Cabinet Parameters

| Technical Parameters    | BC100DE       |
|-------------------------|---------------|
| Battery Type            | LFP           |
| Battery Module Capacity | 5.12 kWh      |
| Number of Modules       | 10*2          |
| Total Battery Capacity  | 102.4 kWh     |
| Nominal Voltage         | 512 V         |
| Operating Voltage Range | 456 V ~ 576 V |
| Charge / Discharge Rate | Max. 0.5C     |
| DoD                     | 90%           |

| General Parameters      | BC100DE                                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------------------------------|
| Dimensions (W x H x D)  | 1100 x 2380 x 1100 mm                                                                                     |
| Weight                  | 1.45 T                                                                                                    |
| Installation Site       | Outdoor                                                                                                   |
| IP Protection           | IP54                                                                                                      |
| Anti Corrosion Level    | C4                                                                                                        |
| Operation Humidity      | 5% ~ 95% (No Condensing)                                                                                  |
| Operation Temperature   | -30°C ~+ 50°C                                                                                             |
| Max. Operation Altitude | 3000 m                                                                                                    |
| Communication Port      | Ethernet; CAN                                                                                             |
| Communication Protocol  | CAN; MODBUS TCP / IP                                                                                      |
| Cooling Method          | Air Conditioner                                                                                           |
| Certificates            | EN IEC 62040-1; EN 62477-1; IEC 62619; IEC 63056; GB/T 14710; ISTA 3E; EN IEC 61000-6-2; EN IEC 61000-6-4 |



### Hybrid Inverter Parameters

| Product Specifications                   |  | KAC50DP                                                                                                                                                                                                                                 |
|------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PV Side                                  |  |                                                                                                                                                                                                                                         |
| Max. Input Voltage                       |  | 1000 V                                                                                                                                                                                                                                  |
| MPPT Voltage Range                       |  | 350 V ~ 800 V                                                                                                                                                                                                                           |
| Max. Current per MPPT                    |  | 36 A                                                                                                                                                                                                                                    |
| Number of MPPT                           |  | 3                                                                                                                                                                                                                                       |
| Number of Inputs per MPPT                |  | 2                                                                                                                                                                                                                                       |
| Battery Side                             |  |                                                                                                                                                                                                                                         |
| Max. Input Voltage                       |  | 750 V                                                                                                                                                                                                                                   |
| Min. Input Voltage                       |  | 350 V                                                                                                                                                                                                                                   |
| DC Voltage at Nominal Operation          |  | 500 V ~ 750 V                                                                                                                                                                                                                           |
| Max. DC Current                          |  | 55 A*2                                                                                                                                                                                                                                  |
| Max. DC Input Power                      |  | 55 kW                                                                                                                                                                                                                                   |
| Number of DC Inputs                      |  | 2                                                                                                                                                                                                                                       |
| AC Side (On Grid)                        |  |                                                                                                                                                                                                                                         |
| Nominal AC Output Power                  |  | 50 kW                                                                                                                                                                                                                                   |
| Max. AC Output Power                     |  | 55 kVA                                                                                                                                                                                                                                  |
| Max. AC Current                          |  | 80 A                                                                                                                                                                                                                                    |
| Nominal AC Voltage                       |  | 400 V                                                                                                                                                                                                                                   |
| AC Voltage Range                         |  | 340 V ~ 440 V                                                                                                                                                                                                                           |
| Nominal Grid Frequency / Frequency Range |  | 50 / 60 Hz ±5Hz                                                                                                                                                                                                                         |
| THDi                                     |  | < 3% (100% Load)                                                                                                                                                                                                                        |
| Adjustable PF Range                      |  | -1 (Lagging) ~ 1 (Leading)                                                                                                                                                                                                              |
| AC Side (Off Grid) <sup>1)</sup>         |  |                                                                                                                                                                                                                                         |
| Nominal AC Voltage                       |  | 400 V                                                                                                                                                                                                                                   |
| THDv                                     |  | < 3% (Linear Load)                                                                                                                                                                                                                      |
| Nominal Grid Frequency / Frequency Range |  | 50 / 60 Hz                                                                                                                                                                                                                              |
| Nominal AC Output Power                  |  | 50 kW                                                                                                                                                                                                                                   |
| Max. AC Output Power                     |  | 55 kVA                                                                                                                                                                                                                                  |
| Efficiency                               |  |                                                                                                                                                                                                                                         |
| Max. Efficiency                          |  | 97.5%                                                                                                                                                                                                                                   |
| Protection                               |  |                                                                                                                                                                                                                                         |
| Reverse Connection Protection            |  | Yes                                                                                                                                                                                                                                     |
| DC Switch                                |  | Yes                                                                                                                                                                                                                                     |
| Over-Temperature Protection              |  | Yes                                                                                                                                                                                                                                     |
| Grid Monitoring/Earthing Fault Detection |  | Yes                                                                                                                                                                                                                                     |
| Insulation Monitoring                    |  | Yes                                                                                                                                                                                                                                     |
| DC / AC Surge Protection                 |  | DC Type II; AC Type III                                                                                                                                                                                                                 |
| General Parameters                       |  |                                                                                                                                                                                                                                         |
| Dimensions (W x H x D)                   |  | 650 x 715 x 325 mm                                                                                                                                                                                                                      |
| Weight                                   |  | 76 kg                                                                                                                                                                                                                                   |
| Topology                                 |  | Transformerless                                                                                                                                                                                                                         |
| IP Protection                            |  | IP65                                                                                                                                                                                                                                    |
| Operation Temperature Range              |  | -25 ~ 60°C ( > 45°C Derating )                                                                                                                                                                                                          |
| Operation Humidity Range                 |  | 0 ~ 100% ( No Condensing )                                                                                                                                                                                                              |
| Cooling Method                           |  | Intelligent Air Cooling                                                                                                                                                                                                                 |
| Max. Operation Altitude                  |  | 3000 m                                                                                                                                                                                                                                  |
| Communication Port                       |  | RS-485 / CAN                                                                                                                                                                                                                            |
| Certificates                             |  | EN IEC 62109-1/2; IEC EN 62477-1; EN IEC 61000-6-2/4; EN IEC 61000-3-11; EN 61000-3-12; IEC 60068-2-1/2/14/30/52; IEC 61683; IEC 61727; IEC 62116; IEC 60529; C10/11; CEI 0-21; EN 50549-1; DIN VDE 0126-1-1; VDE-AR-N 4105; UNE 217001 |

1) For off-grid application, STS100D or STS250D automatic switching cabinet is needed.

# BluePulse Series NEW

KAC125D-BC233DE

## Safe & Reliable

- ▶ CATL LFP Battery Cell
- ▶ Double Fire Suppression System Design
- ▶ 1+1 Redundancy Design

## Economical & Efficient

- ▶ Save CapEx, Expanding as Required
- ▶ Efficient and Energy-saving HVAC Design

## Simple & User-friendly

- ▶ Pre-installed in Factory for Easy Installation on site
- ▶ Integrated BMS/EMS, Suitable for Various Applications
- ▶ Effortless Operation, Cloud Control



Outdoor Battery Cabinet Parameters

| Technical Parameters    | BC197DE                                  |  | BC215DE       | BC233DE       |
|-------------------------|------------------------------------------|--|---------------|---------------|
| Battery Type            |                                          |  | LFP           |               |
| Battery Module Capacity |                                          |  | 17.92 kWh     |               |
| Number of Modules       | 11                                       |  | 12            | 13            |
| Total Battery Capacity  | 197 kWh                                  |  | 215 kWh       | 233 kWh       |
| Nominal Voltage         | 704 V                                    |  | 768 V         | 832 V         |
| Operating Voltage Range | 616 V ~ 792 V                            |  | 672 V ~ 864 V | 728 V ~ 936 V |
| Charge / Discharge Rate |                                          |  | 0.5C          |               |
| DoD                     |                                          |  | 90%           |               |
| General Parameters      | BC233DE                                  |  |               |               |
| Dimensions (W x H x D)  | 1300 x 2380 x 1200 mm                    |  |               |               |
| Weight                  | < 2.5 T                                  |  |               |               |
| Installation Site       | Outdoor                                  |  |               |               |
| IP Protection           | IP54                                     |  |               |               |
| Anti Corrosion Level    | C4                                       |  |               |               |
| Operation Humidity      | 5% ~ 95% (No Condensing)                 |  |               |               |
| Operation Temperature   | -30°C ~+ 50°C                            |  |               |               |
| Max. Operation Altitude | 4000 m (> 3000 m Derating)               |  |               |               |
| Communication Port      | Ethernet; CAN                            |  |               |               |
| Communication Protocol  | CAN; TCP                                 |  |               |               |
| Cooling Method          | Air Conditioner                          |  |               |               |
| Certificates            | IEC 62619-2017; UN 38.3; IEC 61000-6-2/4 |  |               |               |

| Product Specifications                   | KAC125D                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------|
| Battery Side                             |                                                                                |
| Max. Input Voltage                       | 1000 V                                                                         |
| Min. Input Voltage                       | 580 V                                                                          |
| DC Voltage at Nominal Operation          | 580 V ~ 1000 V                                                                 |
| Max. DC Current                          | 242 A                                                                          |
| Max. DC Input Power                      | 140 kW                                                                         |
| Number of DC Inputs                      | 1                                                                              |
| AC Side (On Grid)                        |                                                                                |
| Nominal AC Output Power                  | 125 kW                                                                         |
| Max. AC Output Power                     | 138 kW                                                                         |
| Max. AC Current                          | 199 A                                                                          |
| Nominal AC Voltage                       | 400 V                                                                          |
| AC Voltage Range                         | 400 Vac, (-15% + 10%)                                                          |
| Nominal Grid Frequency / Frequency Range | 50 / 60 Hz ±5Hz                                                                |
| THDi                                     | ≤ 3% (Rated Power)                                                             |
| Adjustable PF Range                      | -1 ~+ 1                                                                        |
| AC Side (Off Grid) <sup>1)</sup>         |                                                                                |
| Nominal AC Voltage                       | 400 V                                                                          |
| THDv                                     | < 1% (Resistive Load)                                                          |
| Nominal Grid Frequency / Frequency Range | 50 / 60 Hz                                                                     |
| Nominal AC Output Power                  | 125 kW                                                                         |
| Max. AC Output Power                     | 138 kVA                                                                        |
| Efficiency                               |                                                                                |
| Max. Efficiency                          | 98.5%                                                                          |
| Protection                               |                                                                                |
| Reverse Connection Protection            | Yes                                                                            |
| DC Switch                                | Yes                                                                            |
| Over-Temperature Protection              | Yes                                                                            |
| Insulation Monitoring                    | Yes                                                                            |
| DC / AC Surge Protection                 | Type II(DC side); Type III(AC side)                                            |
| General Parameters                       |                                                                                |
| Dimensions (W x H x D)                   | 650 x 900 x 310 mm                                                             |
| Installation                             | Wall Mounted / Plug in                                                         |
| Weight                                   | 81 kg                                                                          |
| Topology                                 | Transformerless                                                                |
| IP Protection                            | IP66                                                                           |
| Operation Temperature Range              | -30 ~ 60°C ( > 45°C Derating )                                                 |
| Operation Humidity Range                 | 0 ~ 100% (No Condensing)                                                       |
| Cooling Method                           | Intelligent Air Cooling                                                        |
| Max. Operation Altitude                  | 4000 m / ( > 3000 m Derating )                                                 |
| Communication Port                       | RS-485 / CAN 2.0                                                               |
| Certificates                             | CE; IEC 61000; IEC 62477-1; 2012; IEC 61727; IEC 62116; GB/T 34120; GB/T 34133 |

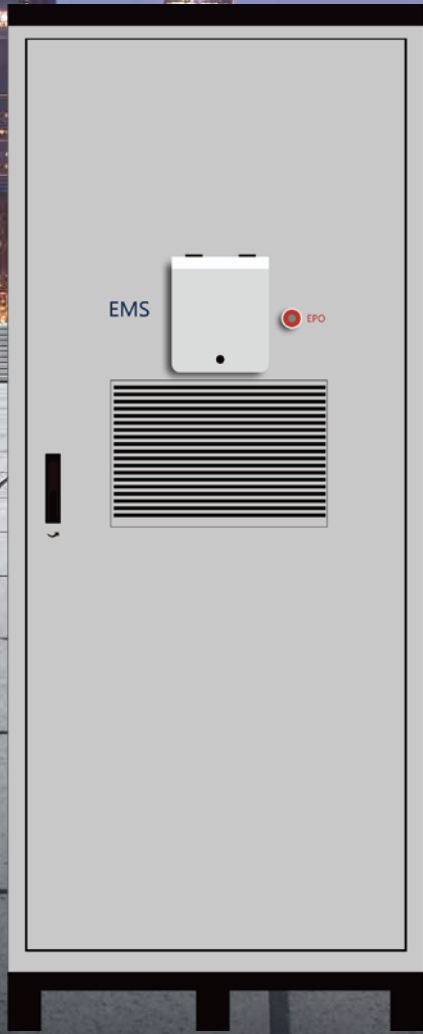
1) For off-grid application, STS250D automatic switching cabinet is needed.

STS100D/STS250D

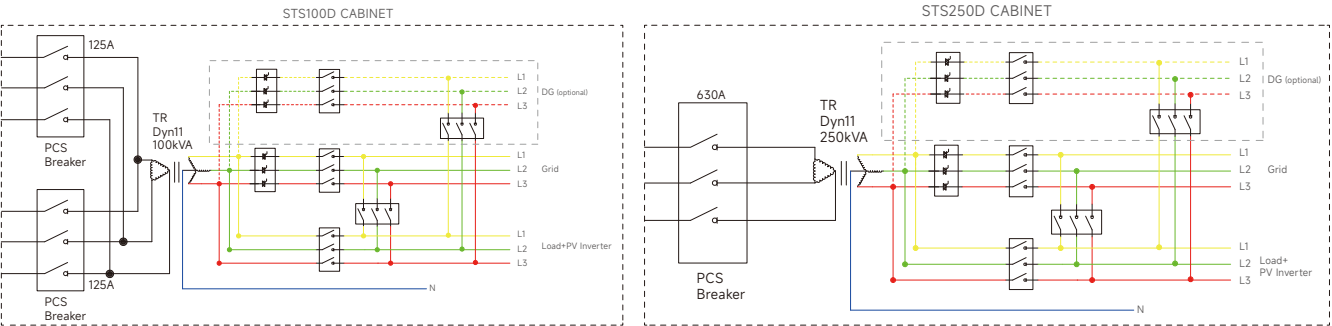
NEW

Automatic Switching Cabinet

On-grid / Off-grid / 100–250 kVA



Block Diagram:



| Parameter                         | STS100D                | STS250D                |
|-----------------------------------|------------------------|------------------------|
| Rated Voltage                     | 400 V                  | 400 V                  |
| Rated Current                     | 144 A                  | 360 A                  |
| Rated Frequency                   | 50 / 60 Hz             | 50 / 60 Hz             |
| Rated Power                       | 100 kVA                | 250 kVA                |
| Max. Grid Input Power             | 150 kVA                | 375 kVA                |
| Switch Time Between On / Off-grid | ≤ 20ms                 | ≤ 20 ms                |
| PCS Input                         | 125 A*2                | 125 A*5                |
| Max. Grid Input                   | 250 A                  | 630 A                  |
| DG Input (Optional)               | 250 A                  | 630 A                  |
| Load Breaker                      | 250 A                  | 630 A                  |
| Grid / DG Bypass Breaker          | 250 A                  | 630 A*2                |
| Isolation Transformer             | 100 kVA                | 250 kVA                |
| Lightning Protection              | Type II                | Type II                |
| Protection Degree                 | IP54                   | IP54                   |
| Relative Humidity                 | 0 ~ 100%               | 0 ~ 100%               |
| Operating Temperature             | -25°C ~+ 45°C          | -25°C ~+ 45°C          |
| Cooling Type                      | Air Cooling            | Air Cooling            |
| Dimensions (W x H x D)            | 900 x 2380 x 930 mm    | 1300 x 2380 x 930 mm   |
| Weight                            | 960 kg                 | 1550 kg                |
| Operating Altitude                | ≤ 3000 m               | ≤ 3000 m               |
| Communication                     | RS-485 / 4G / Ethernet | RS-485 / 4G / Ethernet |
| Installation                      | Tower - type           | Tower - type           |

\* The capacity of the PV inverter for AC coupling can't be larger than the capacity of PCS.  
\*\* One STS100D can be connected to a maximum of two KAC50DP.  
\*\*\* One STS250D can be connected to a maximum of five KAC50DP or two KAC125D.

# EMS01D

## Second-level EMS Communication Box



| MODEL                                      | EMS01D                                             |
|--------------------------------------------|----------------------------------------------------|
| Southbound Communication                   |                                                    |
| Southbound EMS Communication Method        | Ethernet (Electrical)                              |
| Max. Number of Southbound EMS              | 20                                                 |
| Max. Distance of Southbound Communication  | 100 m                                              |
| Ethernet Port Parameter                    | 10 / 100 Mbps Adaptive                             |
| Northbound Communication                   |                                                    |
| Northbound Communication Method (Default)  | Ethernet (Electrical / Optical Fiber)              |
| Northbound Communication Method (Optional) | WLAN / 4G                                          |
| Local Display                              | Embedded Web                                       |
| Indicator Lights                           | Power, Running, Fault+Ethernet Status Indicators   |
| Port Parameters                            |                                                    |
| Number of RS-485 Interfaces                | 7                                                  |
| USB Interface                              | 1 with USB2.0                                      |
| SD Interface                               | 1                                                  |
| Digital Input Detection Interface          | 8                                                  |
| Digital Output Control Interface           | 4, NO+NC                                           |
| Indicator Lights                           | Power, Running, Fault + Ethernet Status Indicators |
| Environmental Parameters                   |                                                    |
| Operating Temperature Range                | -30°C - + 55°C                                     |
| Storage Temperature Range                  | -40°C - + 70°C                                     |
| Operating Relative Humidity                | 5% ~ 95% (No condensation)                         |
| Electrical Parameters                      |                                                    |
| Power Supply                               | DC / AC Redundant Power Supply                     |
| AC Power Supply Voltage Range              | 90 ~ 264 VAC                                       |
| DC Power Supply Voltage Range              | 13 ~ 36 VDC                                        |
| Standby Power Consumption                  | < 40 W                                             |
| Mechanical Parameters                      |                                                    |
| O&M Method                                 | Front Panel Access                                 |
| Dimensions (W x H x D)                     | 560 x 600 x 300 mm                                 |
| Weight                                     | 35 kg                                              |
| IP Degree                                  | IP65                                               |
| Installation Method                        | Wall / Bracket / Floor Mounted                     |

- 

Dual power source,  
220VAC and 24VDC for higher reliability.
- 

Up to 20 portals available for  
southbound communication interfaces.
- 

Support remote monitoring via  
Ethernet / WiFi / 4G, and local monitoring  
via web page.
- 

Various accessible interfaces  
including DI / DO, USB, SD, RS-485.
- 

IP65 outdoor design.

# SPC01 Power Control Box

The SPC01 Power Control Box is designed to realize the function of power limitation or zero-export control in accordance with local grid codes and regulations. It is being used with KSTAR three-phase PV grid-tied inverters (3-125 kW) via RS-485 interface. The built-in smart meter collects the power of the grid-tied side of the PV power station in real time.



- Powerful**

Support number of inverters up to 80  
Long distance of inverter communication up to 1000 m
- Flexible Connectivity**

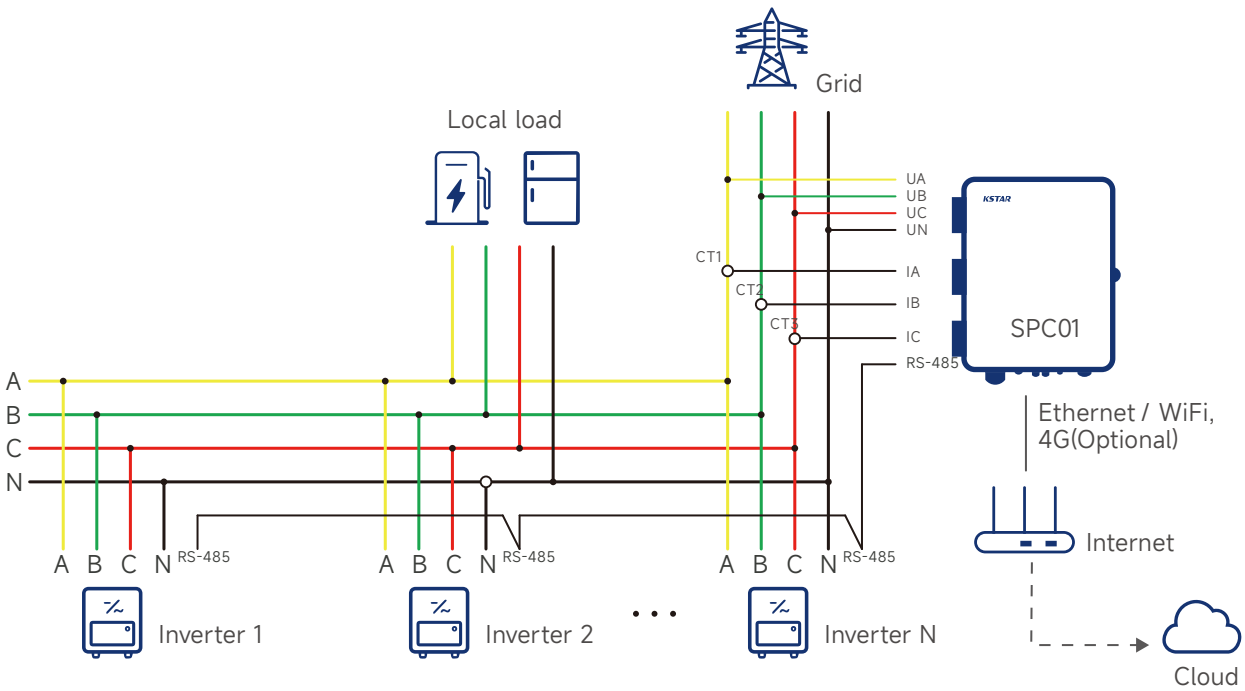
Support multiple communication modes  
Upload operating data to cloud server in real time

- Easy to install**

Wall/rack-mounted  
IP65 for outdoor installation
- Strong Adaptability**

Zero-export response time < 2s  
Support remote update

| Technical Specifications                | SPC01                                          |
|-----------------------------------------|------------------------------------------------|
| Input                                   |                                                |
| Rated Input Voltage                     | 230 VAC (L-N) / 400 VAC (L-L)                  |
| Input Voltage Range                     | 173 ~ 480 VAC                                  |
| Gird Connection Type                    | 3W + N + PE                                    |
| Rated Input Frequency                   | 50 / 60 Hz                                     |
| Input Frequency Range                   | 45 ~ 65 Hz                                     |
| Lightning Protection Grade              | Grade C                                        |
| Communication                           |                                                |
| Inverter Communication Terminals        | RS-485*5                                       |
| Max. Number of Inverter                 | 80 (Each terminal connects up to 16 inverters) |
| Max. Distance of Inverter Communication | 1000 m                                         |
| Communication                           | Ethernet / WiFi / 4G (Optional)                |
| HMI                                     | Bluetooth + Indicator Light                    |
| Function                                |                                                |
| Communication Failure Shutdown          | Yes                                            |
| Remote Update                           | Yes                                            |
| Zero Export                             | Yes                                            |
| Zero-export Response Time               | 2s                                             |
| Zero-export Control Accuracy            | 3%                                             |
| Mechanical Parameter                    |                                                |
| Dimensions (W x H x D)                  | 420 × 320 × 132 mm                             |
| Weight                                  | 5.3 kg                                         |
| Operation Temperature Range             | -25 ~ + 60℃                                    |
| Cooling Type                            | Natural Convection                             |
| Max. Operation Altitude                 | 3000 m                                         |
| Operation Humidity                      | 0 ~ 100% (No Condensation)                     |
| IP Class                                | IP65                                           |
| Installation                            | Wall / Rack Mounted                            |



# LSW-5 Stick Logger (WiFi)

By collecting operating data and power generation of inverter, stick logger (WiFi) can run a long-term and efficient monitoring of PV system. Meanwhile, remote monitoring cloud platform provides powerful data support for the logger. The WiFi module is integrated inside the logger which enables transmitting the data to the monitoring platform via WiFi.

-  Remote Control
-  Remote Upgrade
-  Plug and Play
-  7 / 24 Monitoring



| MODEL                                  | LSW-5                                          |
|----------------------------------------|------------------------------------------------|
| Wireless Parameters                    |                                                |
| Working Frequency                      | 2.412 GHz ~ 2.472 GHz                          |
| Transmitting Power                     | 802.11b: +17+/-1.5dBm(@11Mbps)                 |
|                                        | 802.11g: +15+/-1.5dBm(@54Mbps)                 |
|                                        | 802.11n: +14+/-1.5dBm(@HT20,MCS7)              |
| Antenna Option                         | External WiFi Stick Antenna                    |
| Hardware Parameters                    |                                                |
| Data Interface                         | RS-485                                         |
| Working Voltage                        | DC 5 V ~ DC 12 V                               |
| Working Power                          | 1.5 W                                          |
| Indicator Light                        | One connected to inverter                      |
|                                        | One connected to router                        |
|                                        | One heartbeat indicator light                  |
| Data Storage                           | Default: 8 MByte Flash                         |
| Working Temperature                    | -30°C ~+ 70°C                                  |
| Working Humidity                       | Relative humidity: 10% ~ 90%, No Condensation  |
| Storage Temperature                    | -45°C ~+ 90°C                                  |
| Storage Humidity                       | < 40%                                          |
| IP Grade                               | IP65                                           |
| External Interface                     | DB 9                                           |
| Software AT+Instruction set Parameters |                                                |
| Number of Connections                  | One                                            |
| Serial Communication Rate              | Default: 9600 bps (1200 ~ 115200 bps Optional) |
| Data Transmission Interval             | Default: 5 mins (1 ~ 15 mins Optional)         |
| Configuration                          | AT+Instruction Set                             |
|                                        | Localweb Configuration                         |
|                                        | Remote Server                                  |
| Firmware Upgrade                       | Local Web Upgrade                              |
|                                        | Remote Update                                  |
| Working Mode                           | AP+STA                                         |
| Others                                 | Real-time Control, Data Resuming               |

\* It is recommended to use Stick logger (WiFi) for residential system. And Stick Logger (Ethernet/4G) is optional.

# YDS60-80

## Smart Energy Meter

YDS60-80 is a DIN rail energy meter for three phase measuring.  
With integrated RS-485 interface, it allows real-time reading of all relevant data, such as energy (total and partial), current, voltage, frequency, active and reactive power.



| MODEL                              | YDS60-80                                                               |
|------------------------------------|------------------------------------------------------------------------|
| General                            |                                                                        |
| Network System                     | 3P3W / 3P4W                                                            |
| Nominal Voltage                    | 3 × 230 / 400 VAC, 50 / 60 Hz                                          |
| Current Measurement Range          | Direct Connected: from 0A to 80A, CT Connected: >80 A                  |
| Voltage Measurement Range          | Direct Connected: from 90V to 500V, PT Connected: from 500 V to 1000 V |
| Power Comsumption                  | ≤ 1.5 W                                                                |
| Mounting                           | On 35mm DIN rail                                                       |
| Measurement Category               | Category III                                                           |
| Pollution Degree                   | 2                                                                      |
| Measurement Accuracy               |                                                                        |
| Current (Direct Connected)         | 0.5% from 8 A to 80 A, ±0.4 A from 0.4 A to 8 A                        |
| Current (CT Connected)             | 0.5% from 0.5 A to 5 A, ±0.025 A from 0.025 A to 0.5 A                 |
| Phase Voltage                      | Class 0.5                                                              |
| Line Voltage                       | Class 0.5                                                              |
| Frequency                          | ±0.02 Hz from 45 Hz to 65 Hz                                           |
| Power                              | Class 1                                                                |
| Power Factor                       | ±0.02 from -1 to 1                                                     |
| Active Energy                      | Class 1                                                                |
| Reactive Energy                    | Class 2                                                                |
| Environmental Conditions           |                                                                        |
| Operating Temperature              | -25°C to 60°C                                                          |
| Storage Temperature                | -40°C to 85°C                                                          |
| Humidity                           | 5% to 95% RH (non-condensing)                                          |
| Altitude                           | ≤ 2000 m                                                               |
| Voltage Input (Ph-N)               |                                                                        |
| Operating Voltage                  | 3 × 230 / 400 VAC, 50 / 60 Hz                                          |
| Power Dissipation Voltage Circuits | < 0.5 VA per phase                                                     |
| Measurement Range                  | AC 30 V to 265 V                                                       |
| Current Input                      |                                                                        |
| Rated Current                      | 3 x 1.5(6) A                                                           |
| Power Dissipation Current Circuits | < 0.2 VA per phase                                                     |
| Measurement Range                  | AC 0.05 A to 6 A                                                       |
| Communication                      |                                                                        |
| Communication Protocol             | Modbus                                                                 |
| Communication Port                 | RS-485, half-duplex                                                    |
| Baud Rate                          | 4800 bps / 9600 bps (default) / 19200 bps / 115200 bps                 |
| Stop Bit                           | 1 (default) / 2                                                        |
| Check Bit                          | None (default) / Odd / Even                                            |

\* YDS60-80 smart energy meter is being used along with BluePulse Series C&I ESS.  
\*\* It has not included Current Transformers. For system larger than 50 kW, CT connection is required. Please select the CT that meets the following requirements:  
1. The selected CT's primary rating should be larger than the maximum current passing through the system's AC busbar.  
2. Maximum Current = system capacity / 230 / 3  
\*\*\* Please consult KSTAR for more details.

# SDM630MCT 40mA/V2

DIN Rail Energy Meter for Single and Three Phase Electrical Systems

- ▶ Measures kWh kVArh, kW, kVA, P, F, PF, Hz, dmd, V, A, THD, etc.
- ▶ Bi-directional measurement IMP & EXP
- ▶ Two pulse outputs
- ▶ RS-485 Modbus
- ▶ Din rail mounting 35mm
- ▶ 40 mA or 1 A/5 A CT connection
- ▶ Better than Class 1 / B accuracy



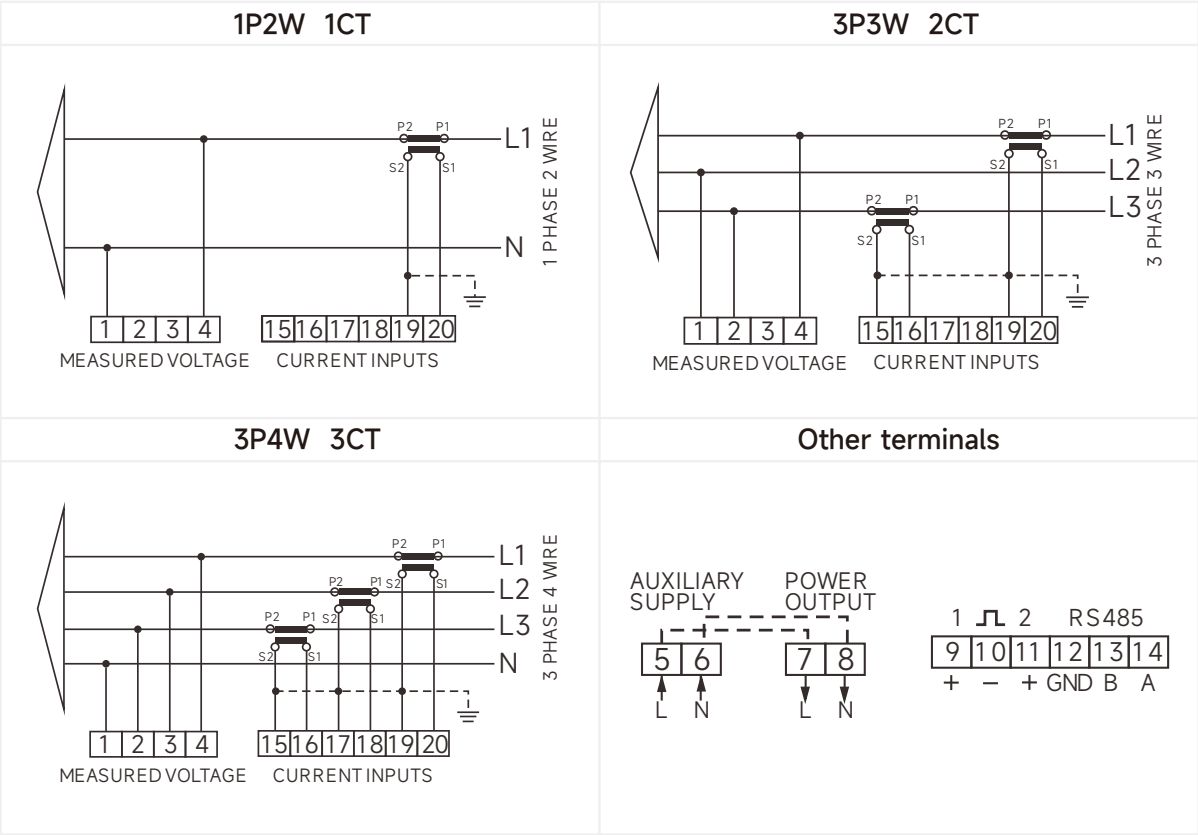
| MODEL                  | SDM630MCT40mA                                              | SDM630MCT V2        |
|------------------------|------------------------------------------------------------|---------------------|
| Type of Measurement    | RMS including harmonics on three phase AC system (3P,3P+N) |                     |
| Power                  | 0.5% of range maximum                                      | 1% of range maximum |
| Active Energy          | IEC 62053-22 Class 0.5S; IEC 62053-21 Class 1.0            |                     |
| Reactive Energy        | IEC 62053-23 Class 2                                       |                     |
| Frequency              | 0.2%of mid-frequency                                       |                     |
| Current                | 0.5% of range maximum                                      |                     |
| Voltage                | 0.5% of range maximum                                      |                     |
| Power Factor           | 1% of unity (0.01)                                         |                     |
| Input                  |                                                            |                     |
| CT Secondary           | 40 mA                                                      | 1 A / 5 A           |
| CT Primary             | 1 ~ 9999 A                                                 |                     |
| Rated Voltage (Un)     | 380 / 400 V a.c.                                           |                     |
| Operational Voltage    | 173 to 480 V a.c. (L-L)                                    |                     |
| Communications         |                                                            |                     |
| Communication Protocol | Modbus RTU                                                 |                     |
| Communication Address  | 1 ~ 247                                                    |                     |
| Transmission Distance  | 1000 m Maximum                                             |                     |
| Transmission Speed     | 1200 bps ~ 38400 bps                                       |                     |
| Parity                 | None (default), Odd, Even                                  |                     |
| Stop Bits              | 1                                                          |                     |
| Response Time          | < 100 ms                                                   |                     |

\* SDM630MCT V2 smart meter is recommended to be used along with C&I string inverters.

\*\* It has not included Current Transformers. Users should choose the CT that meets the following requirements:

1. The selected CT's primary rating should be larger than the maximum current passing through the system's AC busbar.
2. Maximum Current = system capacity / 230 / 3

\*\*\* Please consult KSTAR for more details.



# One click away from 24/7 technical support

- |                                        |                                     |
|----------------------------------------|-------------------------------------|
| Remote Energy Monitoring and Analytics | Integration with Smart Home Systems |
| Fault Detection and Maintenance        | Comprehensive Data Visualization    |
| Grid Interaction and Net Metering      | Detailed Configuration Settings     |
| Enhanced System Lifespan               | Collaborative Monitoring            |
|                                        | Extended Historical Data Analysis   |



## KSTAR SPIRIT

At KSTAR, we understand that technical service is the cornerstone of a reliable and efficient solar solution. Our commitment to unparalleled technical support ensures that your solar investment operates at peak performance throughout its lifecycle.

Illuminate Tomorrow:  
Technical Support Today,  
Tomorrow, Always.

# Global Presence, Local Excellence: Our Worldwide Network

With offices strategically positioned across the globe, we seamlessly connect our innovative solar solutions with communities everywhere. Experience the assurance of a truly global partner — from the manufacturing floor to your doorstep, our commitment to excellence transcends borders.



With cutting-edge technology and a dedicated workforce, we boast a robust production capacity that ensures timely delivery without compromising quality. From concept to creation, our commitment to innovation and streamlined processes empowers us to meet the growing demands for renewable energy solutions.



PV Assembly Workshop



IGBT/MOS Welding



Aging Test



Large-machine Fully Automatic Test System



01 EPS Factory's Green Revolution Turkey, 900kW KSG-120CL-M0





02 C&I ESS Project in Hungary



03 C&I ESS Project in the Netherlands



04 Energy Cost Reduction for Mineral Water Factory  
Turkey, 900kW KSG-120CL-M0

