

Shaping the new energy landscape



KSTAR
Powering the Future

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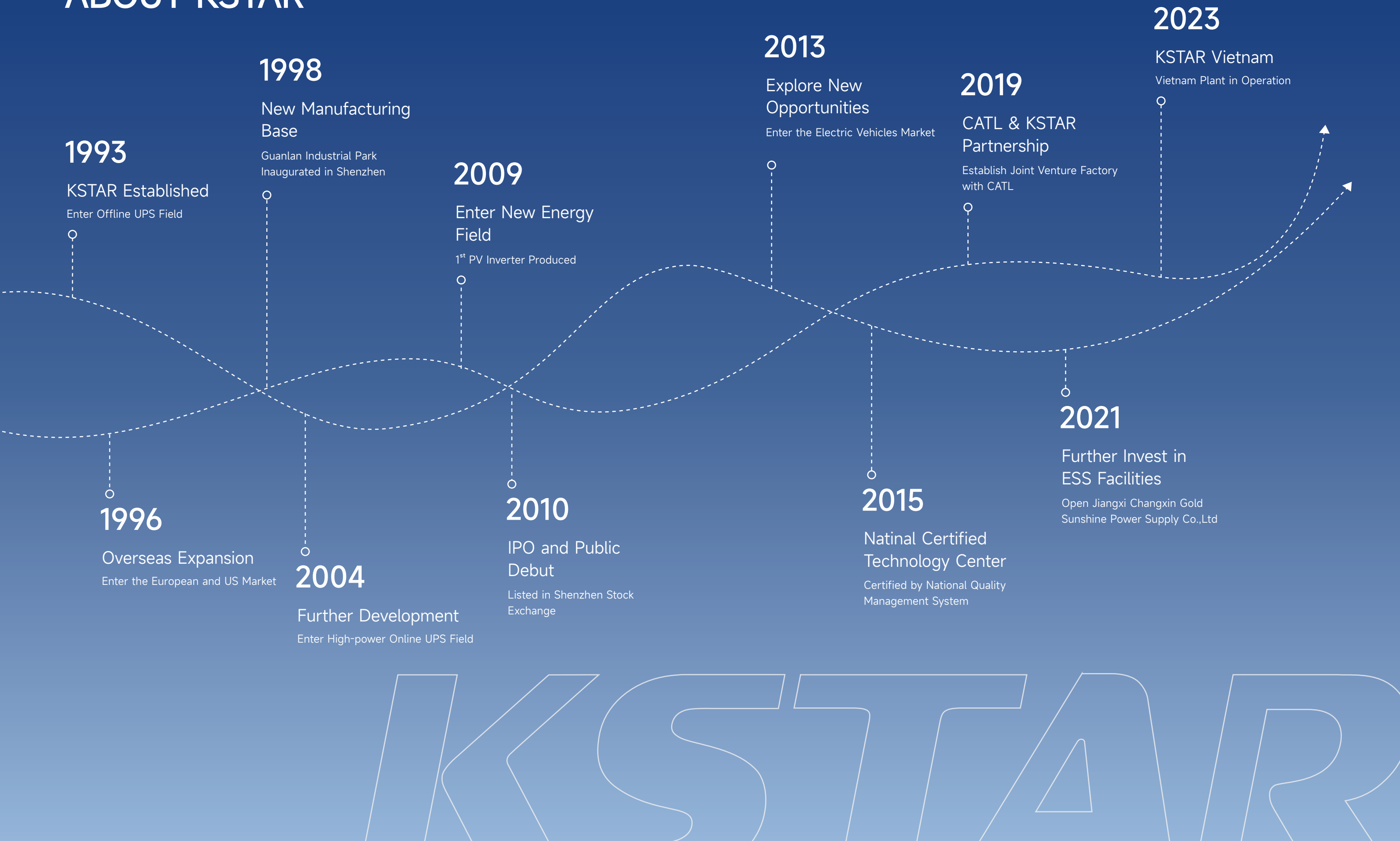
Klean Utility Solution



WWW.KSTAR.COM WWW.KSTAR.EU

2024

ABOUT KSTAR



KSTAR

Shaping the new energy landscape



180+

Countries & Regions

42GW

PV Installation

30+

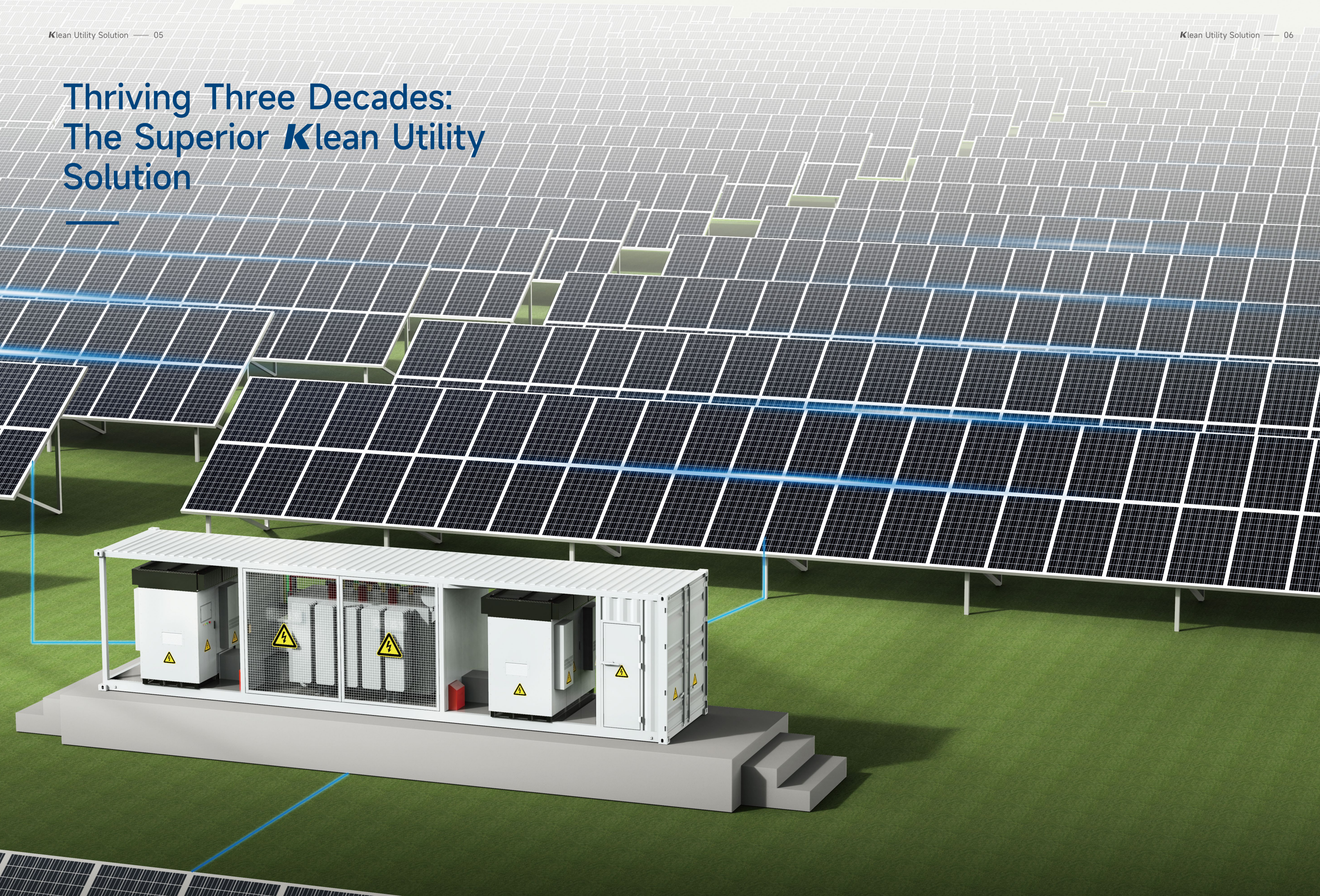
Years History

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 43GW 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: The Superior **K**lean Utility Solution



BlueWave

NEW

Three Phase / 1500 Vdc / 350 kW

Lower CapEx and OpEx

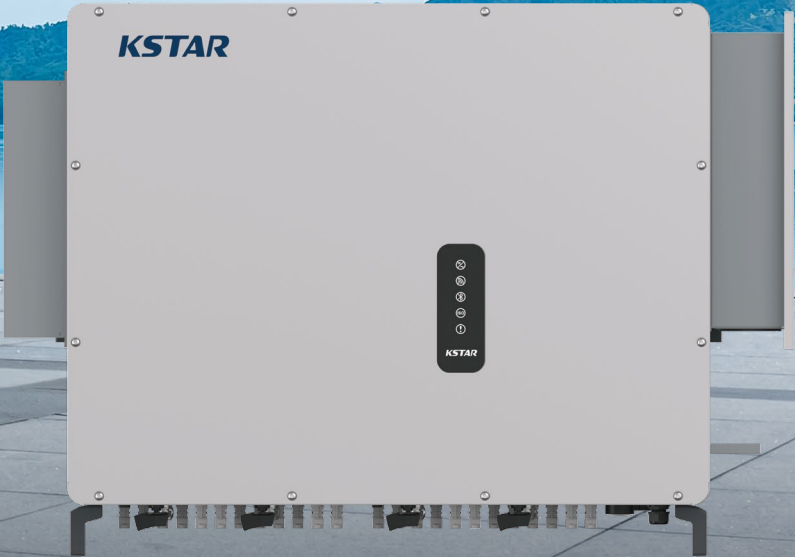
- ▶ Power line communication (PLC)
- ▶ Night SVG function
- ▶ Supports both Al and Cu cable

Maximize Solar Yield

- ▶ 16 independent MPPT
- ▶ Max. efficiency up to 99%
- ▶ Smart I-V curve scan

Improved Safety

- ▶ Type II DC & AC SPD
- ▶ Anti-PID function
- ▶ AFCI optional



MODEL	G350KTHC		G350KTH	
Input(DC)				
Max. DC Voltage	1500 V			
Max. Input Current Per MPPT	30 A		40 A	
Max. Short-circuit Current Per MPPT	45 A		60 A	
Start Voltage	500 V			
MPPT Voltage Range	500 V - 1500 V			
Number of Strings	32		24	
Number of MPPT	16		12	
Strings Per MPPT	2			
Output(AC)				
Nominal AC Output Power	350 kW			
Max. AC Apparent Power	352 kVA			
Nominal AC Voltage	800 V, 3W+PE			
Nominal Frequency	50 / 60 Hz ±5Hz			
Frequency Range	45 ~ 55 Hz / 55 ~ 65 Hz			
Max. Output Current	254 A			
Power Factor (cosΦ)	0.8 leading - 0.8 lagging			
THDi	< 3% (Nominal Power)			
Efficiency				
Max. Efficiency	99%			
Protection Devices				
DC Switch	Yes			
Anti-islanding Protection	Yes			
Over Current Protection	Yes			
DC Reverse Polarity Protection	Yes			
String Fault Detection	Yes			
DC/AC Surge Protection	Type II			
AC Short Circuit Protection	Yes			
Residual Current Detection	Yes			
PID Recovery	Optional			
Night SVG Function	Optional			
General Specifications				
Dimensions W x H x D	1050 x 860 x 393 mm			
Weight	130 kg			
Operating Temperature Range	-30 ~ 60°C			
Cooling Type	Fan Cooling			
Max. Operation Altitude	5000 m (> 4000 m Derating)			
Max. Operating Humidity	0 ~ 100%			
AC Output Terminal Type	OT terminal			
IP Class	IP66			
Noise (dB)	≤ 75 dB			
Topology	Transformer less			
Communication	RS-485 / PLC			
Display	LED, Buletooth+APP			

KSG Series

Three Phase / 1500 Vdc / 250 kW

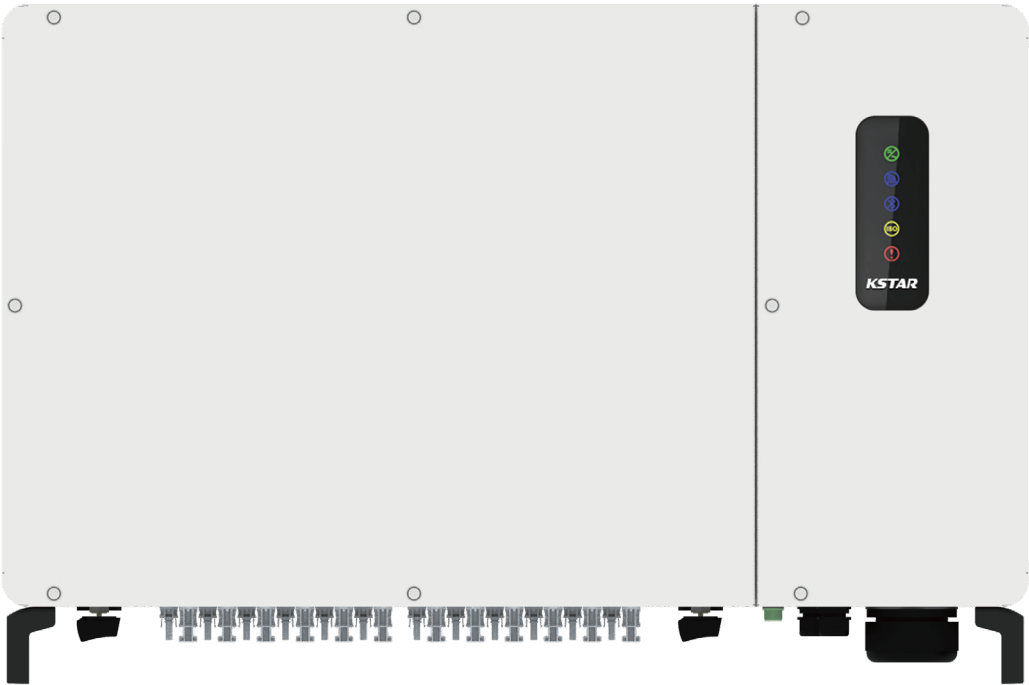
1500 Vdc, 800 Vac
Smart I-V Curve Function

12 MPPT, 24 PV Strings Input
DC and AC Type II SPD

Max. efficiency 99%
Optional Night SVG Function

PLC Communitcation
Max.DC / AC ratio > 1.5

MODEL	KSG-250UH-M0
Input(DC)	
Max. DC Voltage	1500 V
Nominal Voltage	1080 V
Start Voltage	650 V
MPPT Voltage Range	500 V - 1500 V
Number of MPPT	12
Strings Per MPPT	2
Max. Input Current Per MPPT	30 A
Max. Short-circuit Current Per MPPT	50 A
Output(AC)	
Nominal AC Output Power	250 kW 30°C / 225 kW 40°C / 200 kW 50°C
Max. AC Apparent Power	250 kVA
Nominal AC Voltage	800 V 3W+PE
AC Grid Frequency Range	50 / 60 Hz ±5Hz
Max. Output Current	180.4 A
Power Factor (cosΦ)	0.8 leading - 0.8 lagging
THDi	< 3%
Efficiency	
Max. Efficiency	99.00%
Euro Efficiency	98.7%
Protection Devices	
DC Switch	Yes
Anti-islanding Protection	Yes
Output Over Current Protection	Yes
DC Reverse Polarity Protection	Yes
String Fault Detection	Yes
DC/AC Surge Protection	Type II
DC Insulation Resistance Detection	Yes
Residual Current Monitoring	Yes
AC Short-circuit Protection	Yes
General Specifications	
Dimensions W x H x D	1055 x 700 x 336 mm
Weight	110 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	Transformer - less
Communication	RS-485 / PLC
Display	LED / Bluetooth+APP
Certification & Standard	EN/IEC 62109-1; EN/IEC 62109-2; IEC/EN 61000-6-2; IEC/EN 61000-6-4; IEC/EN 61000-3-11; IEC/EN 61000-3-12; IEC 61683; IEC 60068; IEC 60529; IEC 62116; IEC 61727; EN 50549-1; EN 50549-2



MV Central Inverter

Outdoor / 1500 Vdc / 2500–3125 kW

- 

Max. PV Voltage up to 1500 V
DC / AC Ratio up to 1.8
- 

AGC / AVC, Night SVG Function
LVRT / HVRT / FRT Function
- 

Full Power Output under 55°C
IP55 for Outdoor Use
- 

Modular Design for Easy Maintenance
Max. 18 DC Inputs



MODEL	GSM2500D		GSM3125D	
Input(DC)				
Max. DC Input Voltage	1500 Vdc			
Min./Start Voltage	860 ~ 940 V (adjustable)			
MPPT Voltage Range	875 ~ 1300 V			
No. of MPPT	2			
No. of DC Input	Max. 18 (12, 14, 16 optional)			
Max. DC Input Current	4009 A			
Output(AC)				
Rated AC Output Power	2500 kW		3125 kW	
Max. AC Output Apparent Power	2750 kVA		3438 kVA	
Rated AC Voltage	600 Vac, 3W+PE			
AC Voltage Range	510 Vac ~ 660 Vac			
Rated Grid Frequency	50 / 60 Hz			
AC Grid Frequency Range	45 ~ 55 Hz / 55 ~ 65 Hz (adjustable)			
Rated Output Current	2406 A		3007 A	
Max. Output Current	2646 A		3308 A	
Power Factor (cosΦ)	0.8 leading ~ 0.8 lagging			
THDi	< 3%			
Efficiency				
Max. Efficiency	99.00%			
Euro Efficiency	98.70%			
Protection				
DC Input Protection	Load Break Switch + Fuse			
AC Output Protection	Circuit Breaker			
Surge Protection	DC Type II / AC Type II			
Anti-islanding Protection	Yes			
Insulation Monitoring	Yes			
Leakage Current Monitoring	Yes			
Overheat Protection	Yes			
DC Reverse Polarity Protection	Yes			
AC Short-circuit Protection	Yes			
Anti-PID Function	Optional			
General Specifications				
Dimensions (W x H x D)	2350 x 2400 x 1300 mm			
Weight	3.5 t			
IP Class	IP55			
Topology	Transformerless			
Operating Ambient Temperature Range	-40 ~+ 60°C (> 50°C derating)			
Operating Relative Humidity Range	0 ~ 100%			
Max. Operating Altitude	4000 m (> 3000 m derating)			
Cooling Method	Forced Air Cooling			
Power Consumption at Night	< 250 W			
Communication	Modbus RS-485			
Display	Touch Screen			

MV Power Station

Turnkey solution for large-scale PV plants

20-ft Standard Container / All-in-one / 2500–3125 kW

 Max. PV voltage up to 1500 V
DC/AC ratio up to 1.8

 AGC / AVC,Night SVG function
LVRT/HVRT/FRT function

 Full power output under 50°C
Support outdoor installation

 Modular design for easy maintenance
Multiple DC inputs



MODEL	GSM2500D-MV		GSM3125D-MV
Input(DC)			
Max. DC Input Voltage	1500 Vdc		
Min./Start Voltage	860 ~ 940 V (adjustable)		
MPPT Voltage Range	875 ~ 1300 V		
No. of MPPT	2		
No. of DC Input	Max. 18 (12,14,16 optional)		
Max. DC Input Current	3207 A	4009 A	
Output(AC)			
Rated AC Output Power	2500 kW	3125 kW	
Max. AC Output Power	2750 kVA	3438 kVA	
Inverter Max. Output Current	2646 A	3308 A	
AC Output Voltage	10 ~ 35 kV		
Rated Grid Frequency	50 / 60 Hz		
AC Grid Frequency Range	45 ~ 55 / 55 ~ 65 (adjustable)		
Power Factor (cosΦ)	0.8 leading ~ 0.8 lagging		
THDi	< 3%		
Efficiency			
Inverter Max. Efficiency	99.00%		
Inverter Euro Efficiency	98.70%		
Transformer			
Transformer Rated Power	2500 kVA	3125 kVA	
Transformer Max. Power	2750 kVA	3438 kVA	
LV/MV Voltage	0.6 kV / (10 ~ 35) kV		
Vector Group	Dy 11		
Cooling Type	ONAN		
Oil Type	Mineral Oil (PCB free)		
Protection			
DC Input Protection	Load Break Switch + Fuse		
AC Output Protection	Circuit Breaker		
MV Output Protection	Circuit Breaker		
Surge Protection	DC Type II / AC Type II		
Anti-islanding Protection	Yes		
Insulation Monitoring	Yes		
Leakage Current Monitoring	Yes		
Overheat Protection	Yes		
DC Reverse Polarity Protection	Yes		
AC Short-circuit Protection	Yes		
Anti-PID Function	Optional		
General Specifications			
Dimensions (W x H x D)	6058 x 2896 x 2438 mm		
Weight	13 t		
IP Class	Inverter IP55 / Others IP54		
Auxiliary Power Supply	5 kVA		
Operating Ambient Temperature Range	-40 ~+ 60°C		
Operating Relative Humidity Range	0 ~ 100%		
Max. Operating Altitude	1000 m (Standard) / > 1000m (Optional)		
Cooling Method	Forced Air Cooling		
Communication	IEC 104 Optical Fiber		
Display	Touch Screen		

MV Power Station

Turnkey solution for large-scale PV plants

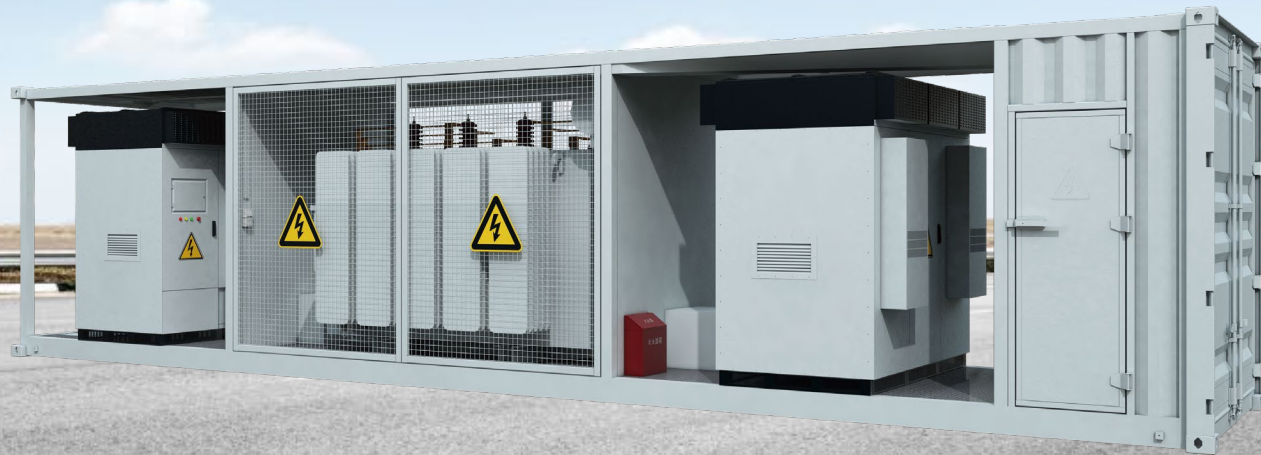
40-ft Standard Container / All-in-one / 5000–6250 kW

 Max. PV Voltage up to 1500 V
DC / AC Ratio up to 1.8

 AGC / AVC Night SVG Function
LVRT / HVRT / FRT Function

 Max.36 DC Inputs
IP55 for Outdoor Use

 Modular Design for Easy Maintenance
Full Power Output under 50°C



MODEL	GSM5000D-MV		GSM6250D-MV
Input(DC)			
Max. DC Input Voltage	1500 Vdc		
Min./Start Voltage	860 ~ 940 V (adjustable)		
MPPT Voltage Range	875 ~ 1300 V		
No. of MPPT	4		
No. of DC Input	Max. 36 (24,28,32 optional)		
Max. DC Input Current	8018 A		
Output(AC)			
Rated AC Output Power	5000 kW	6250 kW	
Max. AC Output Power	5500 kVA	6876 kW	
Inverter Max. Output Current	5293 A	6616 A	
AC Output Voltage	10 ~ 35 kV		
Rated Grid Frequency	50 / 60 Hz		
AC Grid Frequency Range	45 ~ 55 Hz / 55 ~ 65 Hz (adjustable)		
Power Factor (cosΦ)	0.8 leading ~ 0.8 lagging		
THDi	< 3%		
Efficiency			
Inverter Max. Efficiency	99.00%		
Inverter Euro Efficiency	98.70%		
Transformer			
Transformer Rated Power	5000 kVA	6250 kVA	
Transformer Max. Power	5500 kVA	6876 kVA	
LV/MV Voltage	0.6 kV - 0.6 kV / (10 ~ 35) kV		
Vector Group	Dy 11 y11		
Cooling Type	ONAN		
Oil Type	Mineral Oil (PCB free)		
Protection			
DC Input Protection	Load Break Switch + Fuse		
AC Output Protection	Circuit Breaker		
MV Output Protection	Circuit Breaker		
Surge Protection	DC Type II / AC Type II		
Anti-islanding Protection	Yes		
Insulation Monitoring	Yes		
Leakage Current Monitoring	Yes		
Overheat Protection	Yes		
DC Reverse Polarity Protection	Yes		
AC Short-circuit Protection	Yes		
Anti-PID Function	Optional		
General Specifications			
Dimensions (W x H x D)	12192 x 2896 x 2438 mm		
Weight	29 t		
IP Class	Inverter IP55 / Others IP54		
Auxiliary Power Supply	5 kVA		
Operating Ambient Temperature Range	-40 ~+ 60°C		
Operating Relative Humidity Range	0 ~ 100%		
Max. Operating Altitude	1000 m (Standard) / > 1000m (Optional)		
Cooling Method	Forced Air Cooling		
Communication	IEC 104 Optical Fiber		
Display	Touch Screen		

KSM-SCS-04

PV communication box

Multiple communication:
RS-485+CAN+PLC+4G(optional)

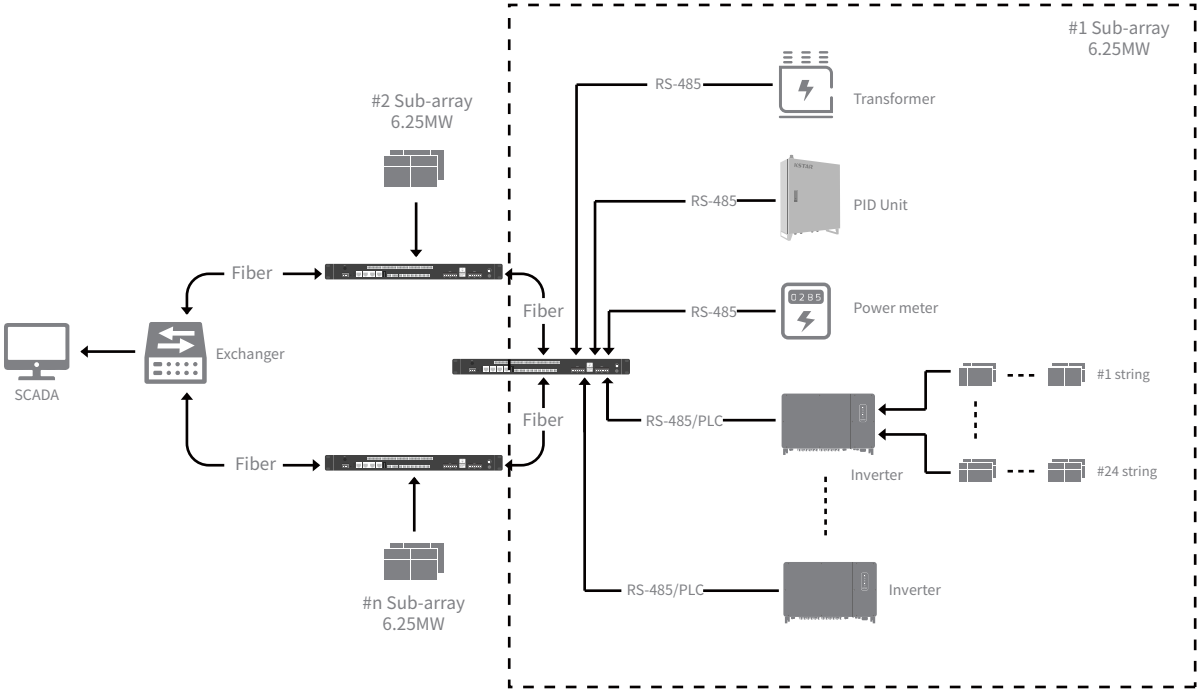
Maximum transmission
distance up to 20km

Built-in high performance
data collector

Anti-PID Funtion



Model	KSM-SCS-04
Configuration	
Internal Data Collector Model	KSM-DCU-04
Number of RS-485 Port	8
Number of CAN Port	2
Number of PLC Port	1
4G Communication	Optional
Optical Fiber Ring Network	1 pair
Number of FE Ports	4
Number of Anti-PID Ports	1
Number of DI&DO Ports	16*DI; 8*DO
Technical Parameters	
Power Supply Voltage Range	100 ~ 240 Vac
Rated PLC Operating Range	800 Vac
Rated PID Operating Range	800 Vac
Rated Operating Frequency	50 Hz / 60 Hz
Opeical Fiber Communication	
Central Wavelength	1310 nm
Transmission Distance	20 km
General	
Operating Temperature Range	-20°C ~ 55°C
Relative Humidity	5% ~ 95% (Non-condensing)
Cable access mode	Bottom in & out
Maintenance	Front
Dimensions(W x H x D)	540 x 670 x 290 mm
Weight	31 kg
IP Degree	IP65
Installation	Bracket / Wall Mounting / Pole Mounting



GSC24-MH

1500Vdc PV Array Combiner Box

- 

Positive & negative DC Fuse protection
Alarms for PV array and blown fuse
- 

Real-time monitoring to the status
of Fuse,Breaker and SPD
- 

IP65 protection
Anti-feedback diode optional
- 

RS-485 and Modbus-RTU protocol
String current and voltage monitoring



MODEL	GSC24-MH
Input	
Max.PV string parallel inputs	24
Rated current for each string	Optional
Operating voltage range	400 ~ 1500 Vdc
System power	From PV array
Communication	RS-485 / Modbus - RTU protocol, 9600 bps
Isolation resistance	> 10 MΩ
Physical	
Dimensions (W x D x H)	890 x 580 x 205 mm
Weight	45 kg
Environment	
Operating temperature	-40℃ ~ + 65℃
Humidity range	0 ~ 95% (non-condensing)
Max. operational altitude	3000 m
Ingress protection rating	IP65

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 Utility Project in the Ukraine 240MW PV Plant



02 Utility Project in the Russian 300MW PV Plant



03 Utility Project in the Spain 10MW PV Plant



04 Utility Project in the Pakistan 900MW PV Plant



05 Utility Project in the Tibet 4747m Altitude PV Plant



06 Utility Project in the Zhejiang 550MW Watersurface PV Plant



07 Utility Project in the Ukraine 200MW PV Plant



08 Utility Project in the Ukraine 15MW PV Plant