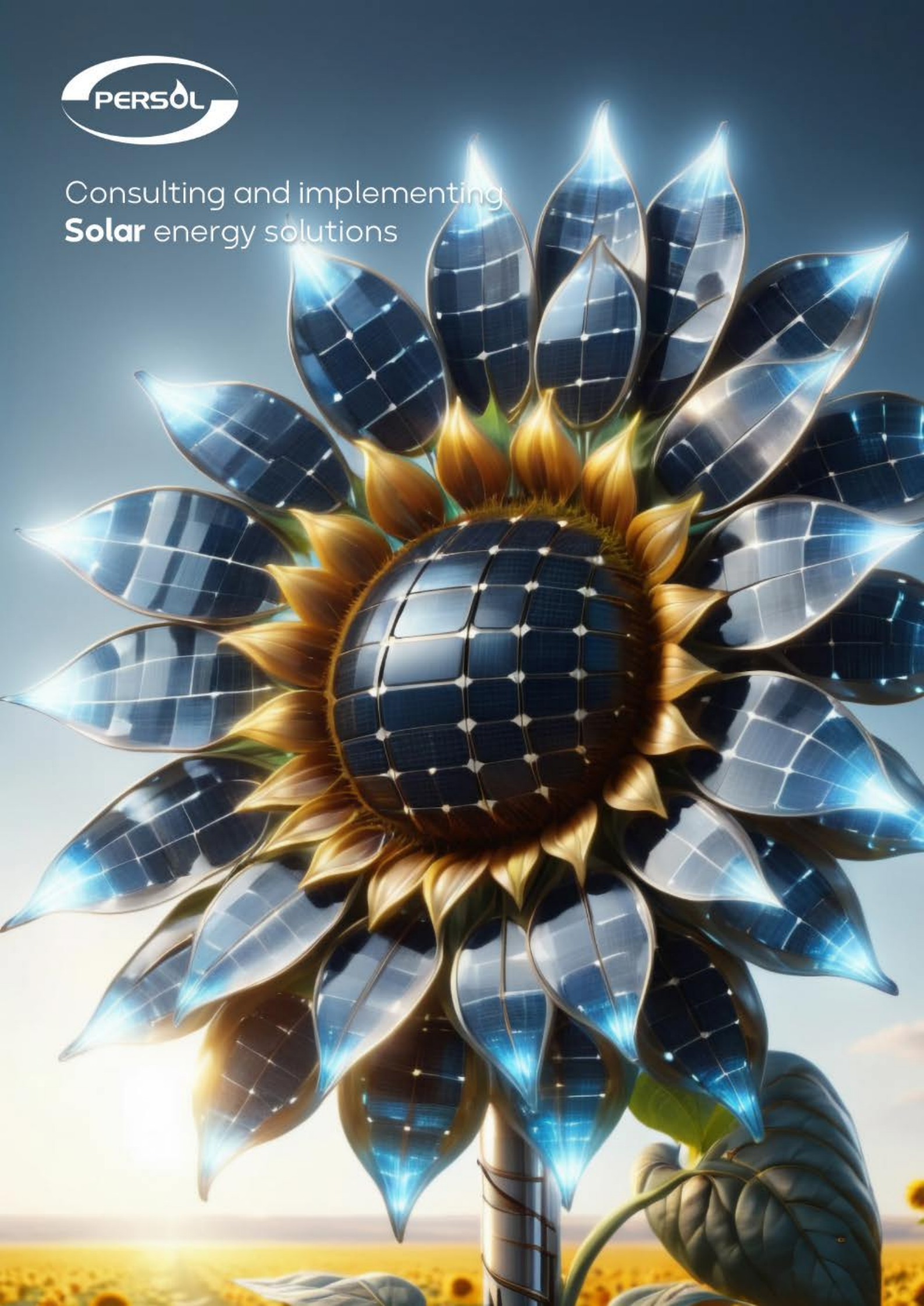
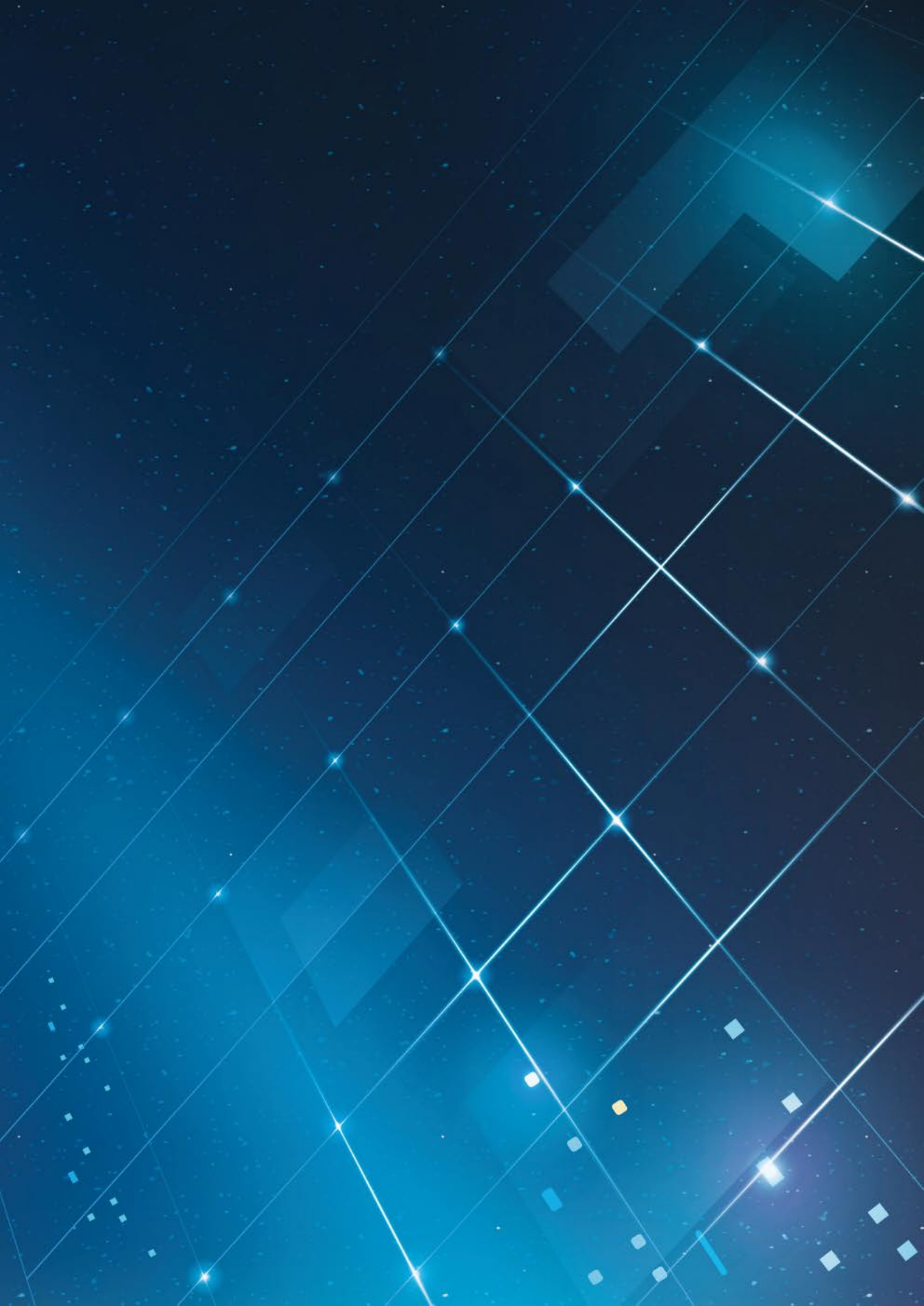
PERSOL

Consulting and implementing
Solar energy solutions



Panels



ASTRONERGY

ASTRO N7

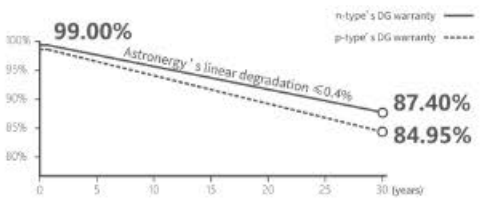
CHSM66RN(DG)/F-BH
Bifacial Series

605~630W

Warranty

15 15-year Product Warranty

30 30-year Linear Power Warranty



n-type TOPCon 4.0
Novel upgrade, enhancing module efficiency

SMBB Design
Enhancing current collection, minimizing power loss

Low Voc Design
Increasing modules per string, lower BOS cost

Bifacial Power Generation
Maximizing bifaciality, boosting backside power output

IEC 61215, IEC 61730
ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety
The first solar company which passed the Nord IEC/TS 62941 certification audit

Tier 1
BloombergNEF

Underwritten by International Insurer

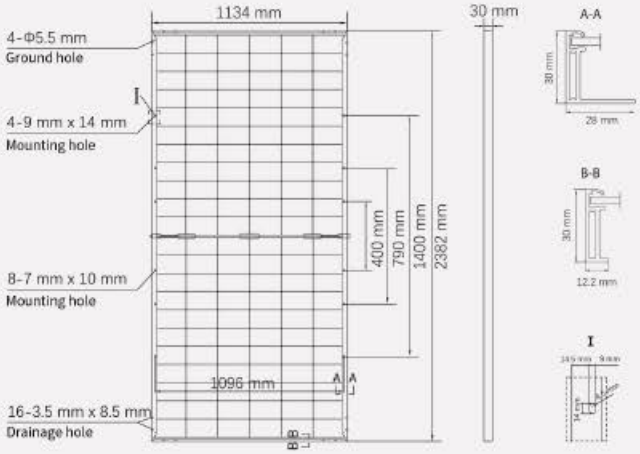
Solar energy industry solutions

PERSOL

605~630W	0~+3%	23.3%	≤ 1.0%	≤ 0.4%
POWER RANGE	POWER SORTING	MAX MODULE EFFICIENCY	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION

Mechanical Specifications

Outer dimensions (L x W x H)	2382 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	132 (6*22)
Frame technology	Aluminum, silver anodized
Front / Back glass	2.0+2.0 mm
Cable length (Including connector)	Portrait: (+)350 mm,(-)250 mm; Customized length
Cable diameter (IEC/UL)	4 mm^2 / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	HCB40 (Standard) / MC4-EVO2A (Optional)
Module weight	32.8 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	1231 kg
Modules per 40' HQ container	720 pcs (Subject to sales contract)



① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5× Maximum Mechanical Design Load.

Electrical Specifications

STC: Irradiance 1000W/m^2, Cell Temperature 25° C, AM=1.5

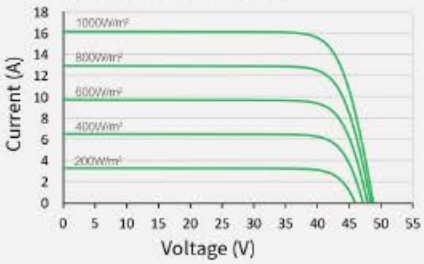
Rated output (Pmpp / Wp)	605	610	615	620	625	630
Rated voltage (Vmpp / V)	41.18	41.31	41.43	41.56	41.69	41.82
Rated current (Impp / A)	14.69	14.77	14.84	14.92	14.99	15.07
Open circuit voltage (Voc / V)	48.59	48.74	48.89	49.04	49.19	49.34
Short circuit current (Isc / A)	15.86	15.94	16.02	16.11	16.19	16.27
Module efficiency	22.4%	22.6%	22.8%	23.0%	23.1%	23.3%

BNPI: Irradiance: front 1000W/m^2, rear 135W/m^2, Cell Temperature 25° C, AM=1.5

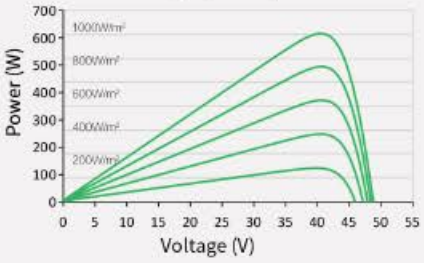
Rated output (Pmpp / Wp)	665	670	675	680	685	690
Rated voltage (Vmpp / V)	41.00	41.13	41.25	41.37	41.49	41.61
Rated current (Impp / A)	16.22	16.29	16.36	16.44	16.51	16.58
Open circuit voltage (Voc / V)	48.79	48.94	49.09	49.14	49.19	49.24
Short circuit current (Isc / A)	17.45	17.53	17.61	17.72	17.83	17.94

Curve

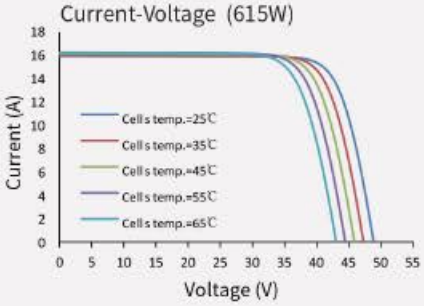
Current-Voltage (615W)



Power-Voltage (615W)



Current-Voltage (615W)



Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.29%/℃
Temperature coefficient (Isc)	+0.043%/℃
Temperature coefficient (Voc)	-0.25%/℃

Operating Parameters

Bifaciality (Pmpp)	80±5%
Junction box IP rating	IP 68
Max. series fuse rating	35 A
Max. system voltage (IEC/UL)	1500V_{DC}

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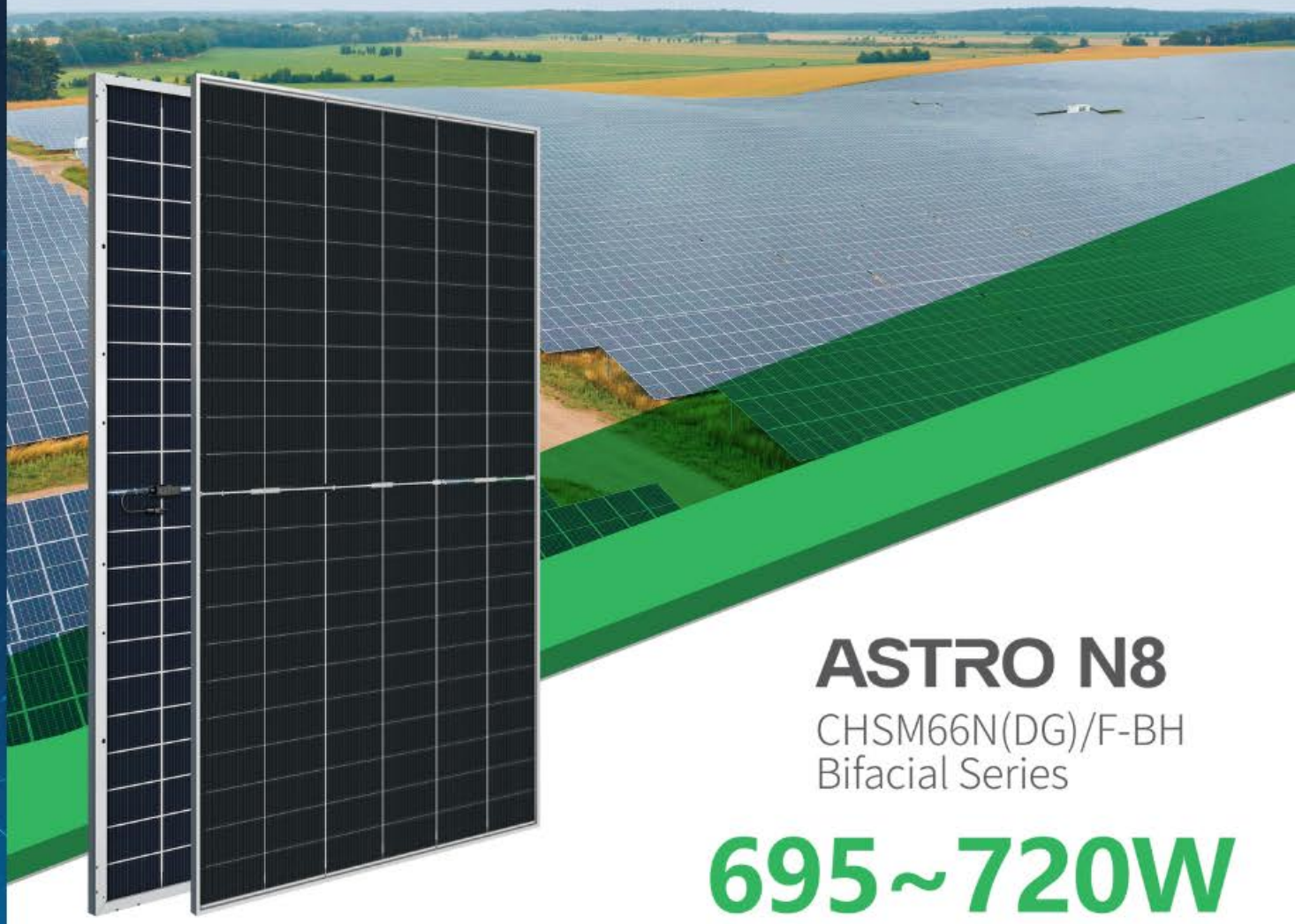
ASTRONERGY



ASTRO N8

CHSM66N(DG)/F-BH
Bifacial Series

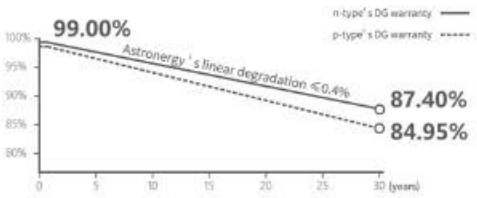
695~720W

Assist carbon neutrality CO_2

Warranty

15 15-year Product Warranty

30 30-year Linear Power Warranty



n-type TOPCon 4.0
Novel upgrade, enhancing module efficiency

Low Voc Design
Increasing per string power, lower BOS cost and LCOE

Bifacial Power Generation
Maximizing bifaciality, boosting backside power output

Multi-scenario Applications
Compatible with mainstream application scenarios

IEC 61215, IEC 61730
ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety
The first solar company which passed the Nord IEC/TS 62941 certification audit

TOP PERFORMER 2024 kiwa PV MODULE RELIABILITY SCORECARD

Tier 1 BloombergNEF

Underwritten by International Insurer

Solar energy industry solutions

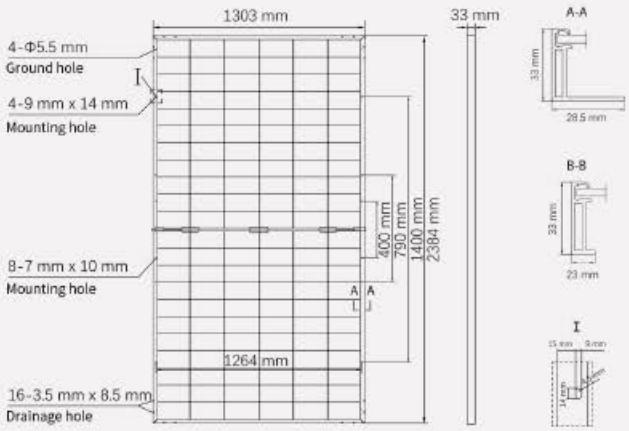
PERSOL

695~720W	0~+3%	23.2%	≤ 1.0%	≤ 0.4%
POWER RANGE	POWER SORTING	MAX MODULE EFFICIENCY	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION

Mechanical Specifications

Outer dimensions (L x W x H)	2384 x 1303 x 33 mm
Cell type	n-type mono-crystalline
No. of cells	132 (6*22)
Frame technology	Aluminum, silver anodized
Front / Back glass	2.0+2.0 mm
Cable length (Including connector)	Portrait: (+)350 mm,(-)280 mm; Customized length
Cable diameter (IEC/UL)	4 mm^2 / 12 AWG
① Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back)
Connector type (IEC/UL)	HCB40 (Standard) / MC4-EVO2A (Optional)
Module weight	38 kg
Packing unit	33 pcs / box
Weight of packing unit (for 40'HQ container)	1295 kg
Modules per 40' HQ container	594 pcs (Subject to sales contract)

① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.



Electrical Specifications

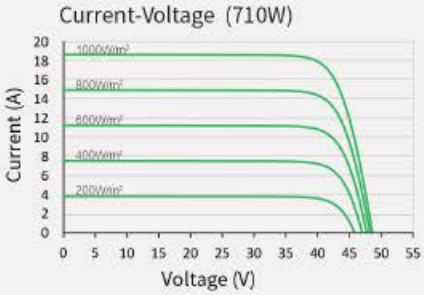
STC: Irradiance 1000W/m^2, Cell Temperature 25° C, AM=1.5

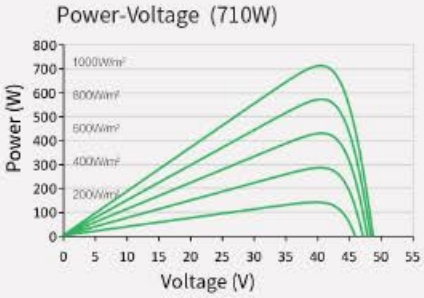
Rated output (Pmpp / Wp)	695	700	705	710	715	720
Rated voltage (Vmpp / V)	39.98	40.15	40.31	40.48	40.65	40.81
Rated current (Impp / A)	17.38	17.44	17.49	17.54	17.59	17.64
Open circuit voltage (Voc / V)	48.17	48.37	48.57	48.77	48.97	49.17
Short circuit current (Isc / A)	18.33	18.38	18.43	18.48	18.53	18.58
Module efficiency	22.4%	22.5%	22.7%	22.9%	23.0%	23.2%

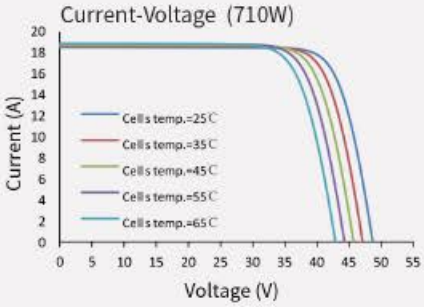
BNPI: Irradiance: front 1000W/m^2, rear 135W/m^2, Cell Temperature 25° C, AM=1.5

Rated output (Pmpp / Wp)	765	770	775	780	785	790
Rated voltage (Vmpp / V)	39.99	40.11	40.22	40.34	40.46	40.57
Rated current (Impp / A)	19.13	19.20	19.27	19.34	19.40	19.47
Open circuit voltage (Voc / V)	48.24	48.38	48.52	48.66	48.80	48.94
Short circuit current (Isc / A)	20.06	20.13	20.20	20.26	20.33	20.40

Curve







Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.29%/℃
Temperature coefficient (Isc)	+0.043%/℃
Temperature coefficient (Voc)	-0.25%/℃

Operating Parameters

Bifaciality (Pmpp)	80±5%
Junction box IP rating	IP 68
Max. series fuse rating	35 A
Max. system voltage (IEC/UL)	1500V_{DC}

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AIKO

Comet 2N+ Dual-Glass Module
600W-625W

Second Generation
Comprehensive Upgrade:

- **Partial Shading Optimisation**
- **Better Temperature Coefficient**
- **High Temperature Restriction**
- **Micro-crack Resistance**

- Higher Power
- Lower BOS
- PFAS-free

15 year Product Warranty
30 year Performance Warranty
Extendable to 25yrs*

ESG
intersolar award 2023 WINNER
reddot winner 2023

CE CGC Munich RE

Solar energy industry solutions

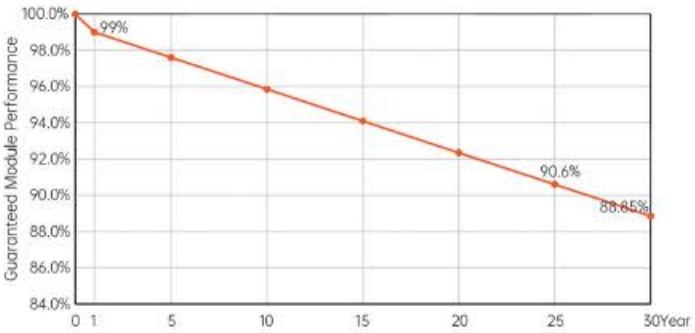
PERSOL

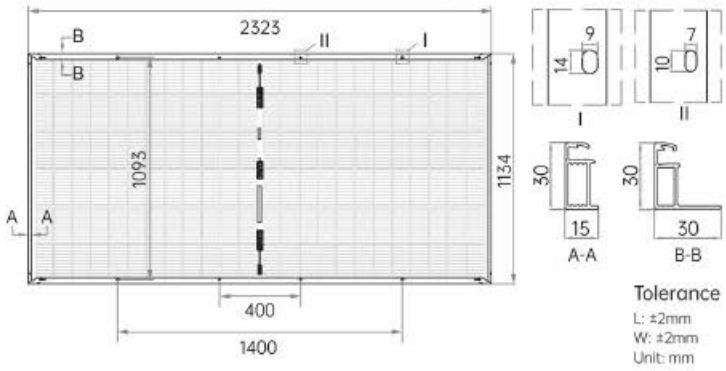
Comet 2N+

AIKO-A-MAH72Dw

625W	23.7%	⩽1%	⩽0.35%
Output	Efficiency	First-year Degradation	Annual Degradation from Year 2-30

30-year Linear Performance Warranty





Tolerance
L: ±2mm
W: ±2mm
Unit: mm

Electrical Characteristics (STC: AM1.5 1000W/m² 25℃ NOCT: AM1.5 800W/m² 20℃ 1m/s)

Power Tolerance:0~ + 3%

Module Type	AIKO-A600-MAH72Dw		AIKO-A605-MAH72Dw		AIKO-A610-MAH72Dw		AIKO-A615-MAH72Dw		AIKO-A620-MAH72Dw		AIKO-A625-MAH72Dw	
Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P_{max} [W]	600	452	605	456	610	459	615	463	620	467	625	471
V_{oc} [V]	54.14	51.13	54.24	51.22	54.34	51.32	54.44	51.41	54.57	51.53	54.70	51.66
V_{mp} [V]	44.80	42.31	44.90	42.40	45.00	42.50	45.10	42.59	45.20	42.69	45.30	42.78
I_{sc} [A]	14.14	11.44	14.22	11.50	14.30	11.57	14.38	11.63	14.46	11.70	14.54	11.76
I_{mp} [A]	13.40	10.69	13.48	10.76	13.56	10.82	13.64	10.89	13.72	10.95	13.80	11.01
Module Efficiency	**22.8%**		**23.0%**		**23.2%**		**23.3%**		**23.5%**		**23.7%**	

Mechanical Specification

Cell Type	N-Type ABC
Glass	Dual glass, 2.0 + 2.0mm coated semi tempered glass
Frame	Anodized aluminum
Cable	4mm²(IEC) 12AWG(UL) 350mm or Customized Length
No. of Cells	144(6*24)
Junction Box	IP68,3 bypass diodes
Connector	MC4 Compatible
Weight	31kg±3%
Dimension	2323*1134*30mm
Package Detail	36pcs per pallet / 180pcs per 20'GP / 720pcs per 40'HC

Temperature Ratings (STC)

Temperature Coefficient of I_{sc}	+ 0.05%/ ℃
Temperature Coefficient of V_{oc}	- 0.22%/ ℃
Temperature Coefficient of P_{max}	- 0.26%/ ℃

Installation Guide

Operation Temperature	-40℃ - +85℃
Maximum Series Fuse Rating	25A
Protection Class	Class II
V_{oc} and I_{sc} Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	25 mm diameter hail at 23 m/s
Fire Rating	IEC Class C

AIKO

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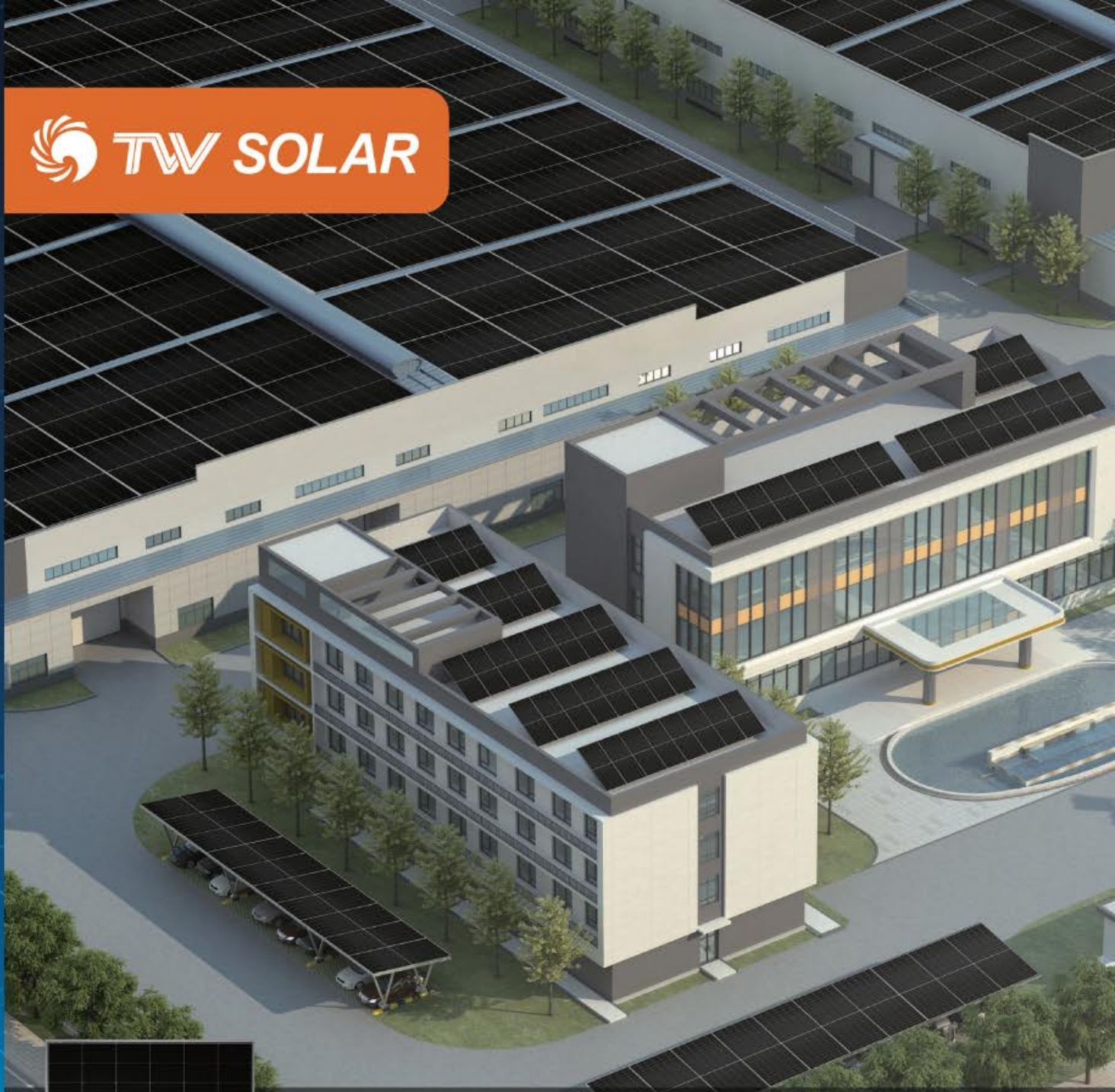
marketing@aikosolar.com

*AIKO Energy reserves right to update the specification without notice
AEWHD_EN_V6.3

TW SOLAR



High Power Output
Low LCOE

Maximum Power
630W+

TWMNH

N-type Half-cell
Bifacial Module (66)

66HD610-630W

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Commercial Rooftop

Utility-scale PV Plants

12 YEAR Materials Warranty

30 YEAR Power Warranty

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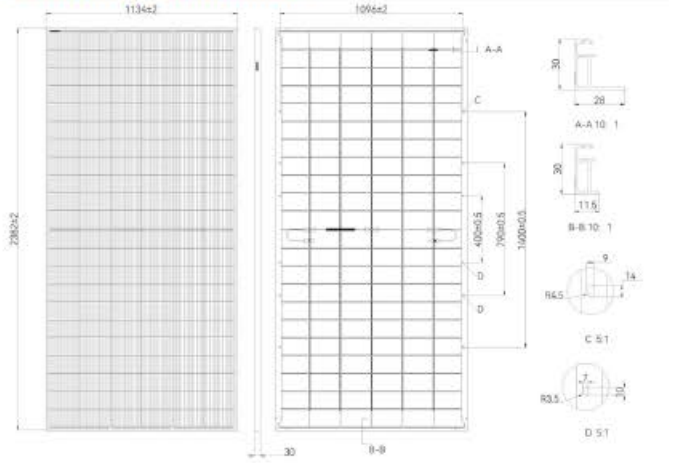
PERSOL

TWMNH N-type Half-cell Bifacial Module (66)

66HD610-630W

DRAWINGS (Unit: mm)



Mechanical Parameters

Cells	TNC (N Type Monocrystalline Cell)
Cell Orientation	132[6×22]
Dimension	2382±2×1134±2×30mm
Weight	32.5kg
Front Glass	2.0mm AR coated heat strengthened glass
Rear Glass	2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm²
Cable Length	+400mm, -200mm or ±1400mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet, 720pcs per 40'HC

Electrical Characteristics (STC)

Module Type: TWMNH-66HDXXX					
Maximum Power: Pmax [W]	610	615	620	625	630
Open Circuit Voltage: Voc [V]	48.70	48.90	49.10	49.30	49.50
Short Circuit Current: Isc [A]	15.94	16.00	16.06	16.12	16.18
Voltage at Maximum Power: Vmp [V]	40.48	40.65	40.82	40.96	41.10
Current at Maximum Power: Imp [A]	15.07	15.13	15.19	15.26	15.33
Module Efficiency: η [%]	22.6	22.8	23.0	23.1	23.3

* STC: Irradiance 1000W/m², Cell Temperature 25℃, Air Mass1.5

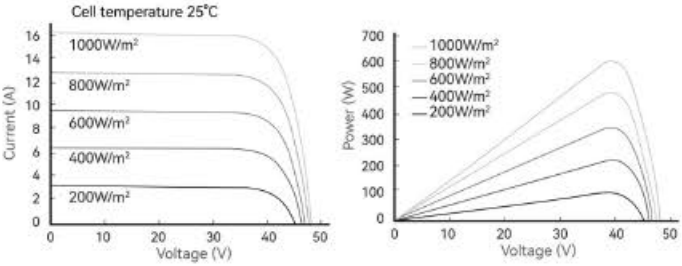
Warranty

Electrical Characteristics (NMOT)

Maximum Power: Pmax [W]	461	464	468	472	476
Open Circuit Voltage: Voc [V]	46.36	46.55	46.74	46.93	47.12
Short Circuit Current: Isc [A]	12.87	12.92	12.97	13.01	13.06
Voltage at Maximum Power: Vmp [V]	37.89	37.98	38.18	38.32	38.45
Current at Maximum Power: Imp [A]	12.17	12.22	12.26	12.32	12.38

* NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Air Mass1.5, Wind Speed 1m/s

I-V Curve



Electrical characteristics with different rear side power gain

5%	Maximum Power: Pmax [W]	640	645	651	656	661
	Module Efficiency: η [%]	23.7	23.9	24.1	24.3	24.5
15%	Maximum Power: Pmax [W]	701	707	713	718	724
	Module Efficiency: η [%]	26.0	26.2	26.4	26.6	26.8
25%	Maximum Power: Pmax [W]	762	768	775	781	787
	Module Efficiency: η [%]	28.2	28.4	28.7	28.9	29.1

Temperature Rating

Temperature Coefficient of Pmax	-0.28%/℃
Temperature Coefficient of Voc	-0.24%/℃
Temperature Coefficient of Isc	+0.046%/℃
NMOT	45±2℃

Certifications

Quality Management System and Product Certification

ISO 9001: 2015/Quality management system
ISO 14001: 2015/Environmental management system
ISO 45001: 2018/Occupation health safety management system
ISO 50001: 2018/Energy management system
IEC 62941: 2019/Quality system for PV module manufacturing
IEC 61215/61730, IEC 62804(PID), IEC 61701(Salt),
IEC 62716 (Ammonia), IEC 60068-2-68(Sand)

Operating Parameters

Operating Temperature	-40℃~+85℃
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+3%
Bifaciality	80±5%

Email: sales@tongwei.com **Website:** en.tongwei.com.cn **Add:** No.588, Middle Section Tianfu Avenue, High-Tech Zone, Chengdu, China (Sichuan) Pilot Free Trade Zone **Tel:** +86 02860666455

TW SOLAR

TWMNF

N-type Half-cell
Bifacial Module(66)

66HD700-720W

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Utility-scale PV Plants

12 YEAR Materials Warranty

30 YEAR Power Warranty

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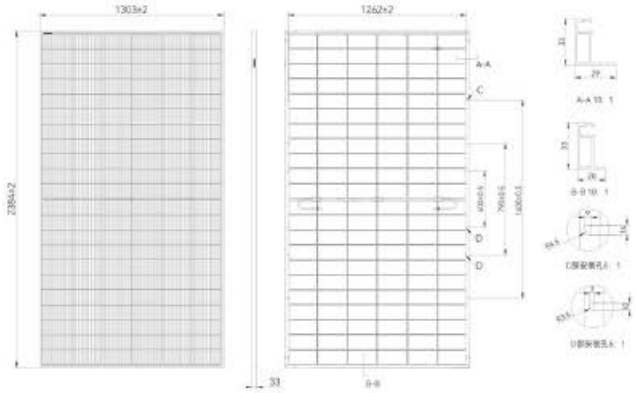
PERSOL

DRAWINGS (Unit: mm)



MECHANICAL PARAMETERS

Cells	TNC(N Type Monocrystalline Cell)
Cell Orientation	132[6×22]
Dimension	2384±2×1303±2×33mm
Weight	37.9kg
Front Glass	2.0mm AR coated heat strengthened glass
Rear Glass	2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm²
Cable Length	+400mm, -200mm or±1400mm,length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	33pcs per pallet, 594pcs per 40'HC

Electrical Characteristics (STC)

Moduel type: TWMNF-66HDXXX					
Maximum Power: Pmax [W]	700	705	710	715	720
Open Circuit Voltage: Voc [V]	48.60	48.77	48.94	49.11	49.28
Short Circuit Current: Isc [A]	18.35	18.40	18.45	18.50	18.55
Voltage at Maximum Power: Vmp [V]	40.35	40.52	40.69	40.86	41.03
Current at Maximum Power: Imp [A]	17.35	17.40	17.45	17.50	17.55
Module Efficiency: η [%]	22.5	22.7	22.9	23.0	23.2

* STC: Irradiance 1000W/m², Cell Temperature 25℃, AM=1.5

Electrical Characteristics (NMOT)

Maximum Power: Pmax [W]	526	530	534	538	541
Open Circuit Voltage: Voc [V]	46.17	46.33	46.49	46.65	46.82
Short Circuit Current: Isc [A]	14.82	14.86	14.90	14.94	14.98
Voltage at Maximum Power: Vmp [V]	37.55	37.73	37.90	38.08	38.18
Current at Maximum Power: Imp [A]	14.01	14.05	14.09	14.13	14.17

* NMOT: Irradiance 800W/m², Ambient Temperature 20℃, AM=1.5, Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS (Rear Power Gain)

5%	Maximum Power: Pmax[W]	735	740	745	750	756
	Module Efficiency: η [%]	23.7	23.8	24.0	24.1	24.3
15%	Maximum Power: Pmax[W]	805	810	816	822	828
	Module Efficiency: η [%]	25.9	26.1	26.3	26.5	26.7
25%	Maximum Power: Pmax[W]	875	881	887	893	900
	Module Efficiency: η [%]	28.2	28.4	28.6	28.7	29.0

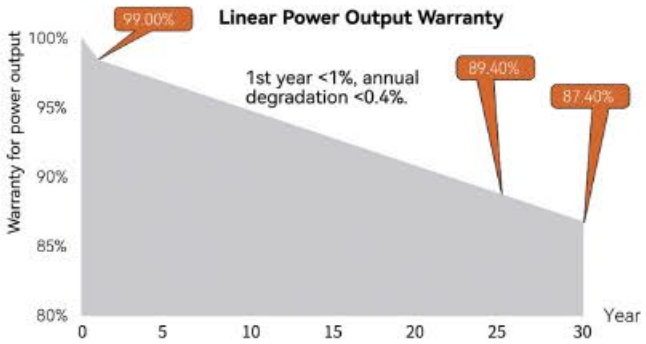
TEMPERATURE PARAMETERS

Temperature Coefficient (Pmax)	-0.28%/℃
Temperature Coefficient (Voc)	-0.24%/℃
Temperature Coefficient (Isc)	+0.046%/℃
NMOT	45±2℃

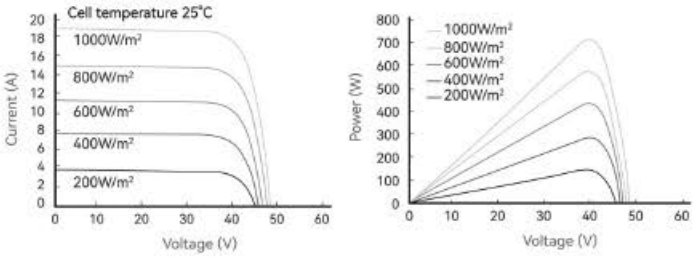
MAXIMUM RATINGS

Operational Temperature	-40℃~+85℃
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	35A
Power Output Tolerance	0~+3%
Bifaciality	80±5%

WARRANTY



I-V CURVE



CERTIFICATIONS

Quality Management System and Product Certification

ISO 9001: 2015/Quality management system
ISO 14001: 2015/Environmental management system
ISO 45001: 2018/Occupation health safety management system
ISO 50001: 2018/Energy management system
IEC 62941: 2019/Quality system for PV module manufacturing
IEC 61215/61730, IEC 62804(PID), IEC 61701(Salt),
IEC 62716 (Ammonia), IEC 60068-2-68(Sand)

Email: sales@tongwei.com **Website:** en.tongwei.com.cn **Add:** No.588, Middle Section Tianfu Avenue, High-Tech Zone, Chengdu, China (Sichuan) Pilot Free Trade Zone **Tel:** +86 02860666455

Vertex N

N-type i-TOPCon

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG21C.20 **695-720W**

720W / MAXIMUM POWER OUTPUT

23.2% / MAXIMUM EFFICIENCY

High customer value

- Standardized module size with flagship module power, 35W higher compared with conventional technology
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 2%~6%
- Higher container space utilization effectively reduces the freight cost
- Certified Low-Carbon Footprint
- The Star of LCOE

High power up to 720W

- Up to 23.2% module efficiency , on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment

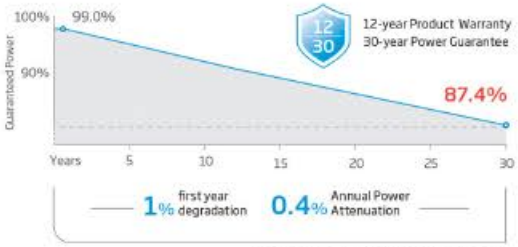
High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions

High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

Performance Warranty



* Please refer to product warranty for details.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System
ISO14067: Product Carbon Footprint Limited Assurance
ISO14025: Environmental Product Declaration

Version number: TSM_EN_2024_B

Trinasolar

Solar energy industry solutions

PERSOL

Vertex N

N-type i-TOPCon Bifacial Dual Glass Monocrystalline Module

ELECTRICAL DATA (STC & NOCT & BNPI)

Testing Condition	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI
Peak Power Watts-PMAX(Wp)*	695	531	770	700	534	776	705	540	781	710	543	787	715	547	792	720	551	798
Power Selection (W)**	0 ~ +5																	
Maximum Power Voltage-VMPP (V)	40.3	37.9	40.3	40.5	38.0	40.5	40.7	38.3	40.7	40.9	38.5	40.9	41.1	38.7	41.1	41.3	38.8	41.3
Maximum Power Current-IMPP (A)	17.25	14.00	19.11	17.29	14.04	19.15	17.33	14.08	19.19	17.36	14.12	19.23	17.40	14.14	19.28	17.44	14.19	19.32
Open Circuit Voltage-VOC (V)	48.3	45.9	48.3	48.6	46.1	48.6	48.8	46.3	48.8	49.0	46.5	49.0	49.2	46.7	49.2	49.4	46.9	49.4
Short Circuit Current-ISC (A)	18.28	14.72	20.25	18.32	14.76	20.30	18.36	14.80	20.34	18.40	14.83	20.39	18.44	14.86	20.43	18.49	14.90	20.49
Module Efficiency η m (%)	22.4			22.5			22.7			22.9			23.0			23.2		

STC: Irradiance 1000W/m2, Cell Temperature 25℃, Air Mass AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20℃, Wind Speed 1m/s. BNPI: Irradiance: front 1000W/m², rear 135W/m², Temperature 25℃, Air Mass AM1.5
*Measuring tolerance: ±3%. **Power selection up to: +3%.

Electrical characteristics with different power bin (reference to 5% & 10% backside power gain)

Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power Watts-PMAX(Wp)*	730	765	735	770	740	776	746	781	751	787	756	792
Maximum Power Voltage-VMPP (V)	40.3	40.3	40.5	40.5	40.7	40.7	40.9	40.9	41.1	41.1	41.3	41.3
Maximum Power Current-IMPP (A)	18.11	18.98	18.15	19.02	18.20	19.06	18.23	19.10	18.27	19.14	18.31	19.18
Open Circuit Voltage-VOC (V)	48.3	48.3	48.6	48.6	48.8	48.8	49.0	49.0	49.2	49.2	49.4	49.4
Short Circuit Current-ISC (A)	19.19	20.11	19.24	20.15	19.28	20.20	19.32	20.24	19.36	20.28	19.41	20.34

Power Bifaciality: 80±5%.

TEMPERATURE RATINGS

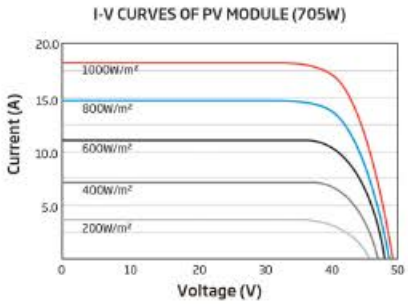
NOCT (Nominal Operating Cell Temperature)	43℃ (±2℃)
Temperature Coefficient of PMAX	- 0.29% /℃
Temperature Coefficient of VOC	- 0.24% /℃
Temperature Coefficient of ISC	0.04% /℃

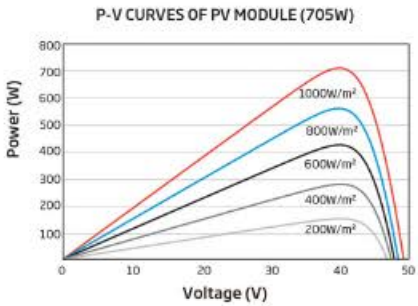
Due to different testing methods, the actual performances might differ from the declared specifications.

MAXIMUM RATINGS

Operational Temperature	-40~+85℃
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	35A

CURVES OF PV MODULE

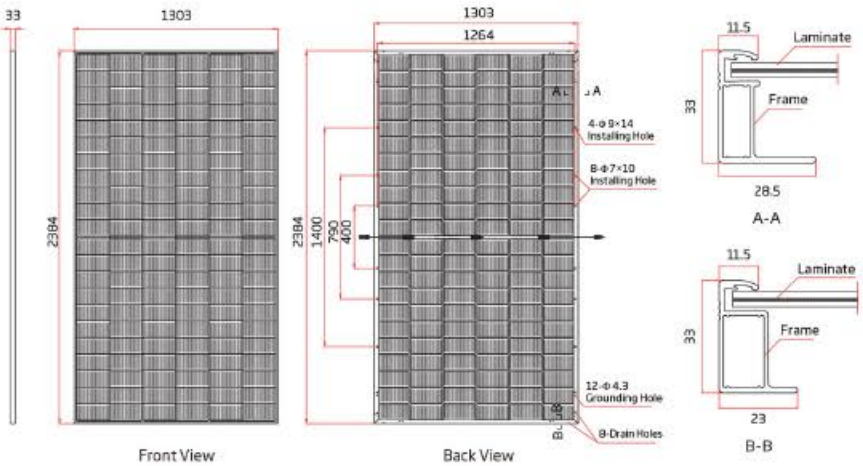




MECHANICAL DATA

Solar Cells	N-type i-TOPCon Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1303×33 mm (93.86×51.30×1.30 inches)
Weight	38.3 kg (84.4 lb)
Front Glass	2.0 mm (0.08 inches), AR Coating Heat Strengthened Glass
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Coating)
Frame	33mm(1.30 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 Plus / TS4*
Packaging	Modules per box: 33 pieces Modules per 40' container: 594 pieces

*Please refer to regional datasheet for specified connector.



Version number: TSM_EN_2024_B

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Solar energy industry solutions

PERSOL

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TIER 1
BloombergNEF

DHN-66Z16/DG
585~625W
High Efficiency Double Glass PV Module

Comprehensive Products & System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO
ISO 45001
2018/International standards for occupational health & safety
ISO 14001
2015/Standards for environmental management system
ISO 9001
2015/Quality management system

15 Material & technology warranty

30 Linear power output warranty

TOPCon cells double-sided rate up to 85% and more back power generation by 5-25%

Double-glass Technology, higher encapsulation blocking and mechanical strength

Higher performance in anti hidden cracking, acid and alkali, salt spray, water vapor, UV, PID

TOPCon cells, lower attenuation, better temperature coefficient & dim ligh performance

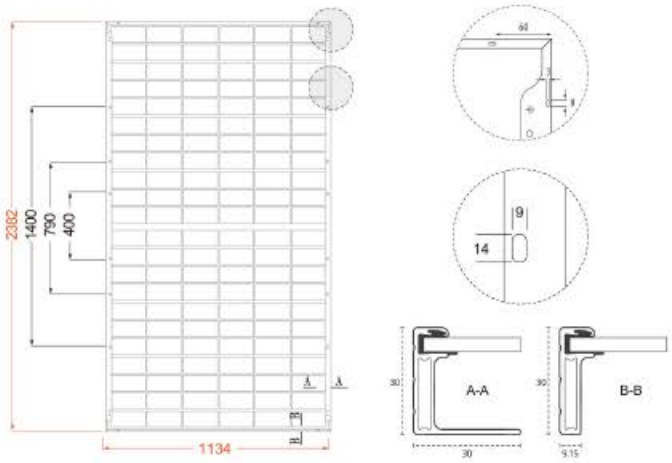
LECO laser assisted sintering technology, reduces contact resistance and improves efficiency by 0.2% -0.5%

Solar energy industry solutions

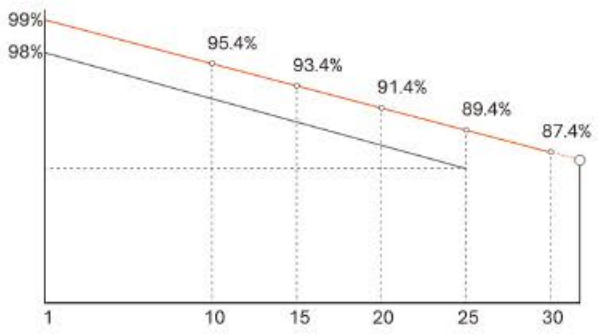
PERSOL

DHN-66Z16/DG 585~625W

Design



30-Year Linear Power Output Warranty



— DAH Solar linear power output guarantee
— Standard linear power output guarantee

Mechanical Specification

No.of Cells	132 (6×22)
Weight	33.2kg
Cells Type	N-type 182×105mm
Dimension (L×W×T)	2382×1134×30mm
Packing	36pcs/Pallet, 720pcs/40HQ

Cable (Including connector)	4.0mm², 300/200mm in length, length can be customized
Glass	2.0mm High Transmission, Antireflection Coating
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible

Electrical Characteristics

Module Type	DHN-66Z16/DG																	
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	585	441	590	445	595	448	600	452	605	456	610	460	615	463	620	467	625	471
Open-circuit Voltage (Voc/V)	47.2	44.8	47.4	45.0	47.6	45.2	47.8	45.4	48.0	45.6	48.2	45.8	48.4	46.0	48.6	46.2	48.8	46.4
Maximum Power Voltage (Vmp/V)	39.9	37.9	40.1	38.1	40.3	38.3	40.5	38.5	40.7	38.7	40.9	38.9	41.1	39.0	41.3	39.2	41.5	39.4
Short-circuit Current (Isc/A)	15.58	12.58	15.64	12.63	15.70	12.68	15.76	12.72	15.82	12.77	15.88	12.82	15.94	12.87	16.00	12.92	16.06	12.97
Maximum Power Current (Imp/A)	14.66	11.63	14.71	11.67	14.76	11.71	14.81	11.75	14.86	11.79	14.91	11.83	14.96	11.87	15.01	11.91	15.06	11.95
Module Efficiency (STC)	21.66		21.84		22.03		22.21		22.40		22.58		22.77		22.95		23.14	
Refer Bifacial Factor	80±5%																	

STC-Standard Test Environment: Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5
NOCT-Standard Test Environment: Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s

Double-Sided Power Generation Parameters (Rear gain)

5%	Maximum Power (Pmax)	614	620	625	630	635	641	646	651	656
	Module Efficiency (%)	22.7	22.9	23.1	23.3	23.5	23.7	23.9	24.1	24.3
15%	Maximum Power (Pmax)	672.8	678.5	684.3	690.0	695.8	701.5	707.3	713.0	718.8
	Module Efficiency (%)	24.9	25.1	25.3	25.5	25.8	26.0	26.2	26.4	26.6
25%	Maximum Power (Pmax)	731.3	737.5	743.8	750.0	756.3	762.5	768.8	775.0	781.3
	Module Efficiency (%)	27.1	27.3	27.5	27.8	28.0	28.2	28.5	28.7	28.9

Operating Parameters

Maximum System Voltage	1500V DC
Operating Temperature	-40 ~ +85°C
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45°C±2°C
Application Level	Class A

Temperature Coefficient

Temperature Coefficient of Isc (αIsc)	0.046%/°C
Temperature Coefficient of Voc (βVoc)	-0.25%/°C
Temperature Coefficient of Pmax (γPmp)	-0.29%/°C

Snow load, frontside / Wind load, backside	5400Pa/2400Pa

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TIER 1
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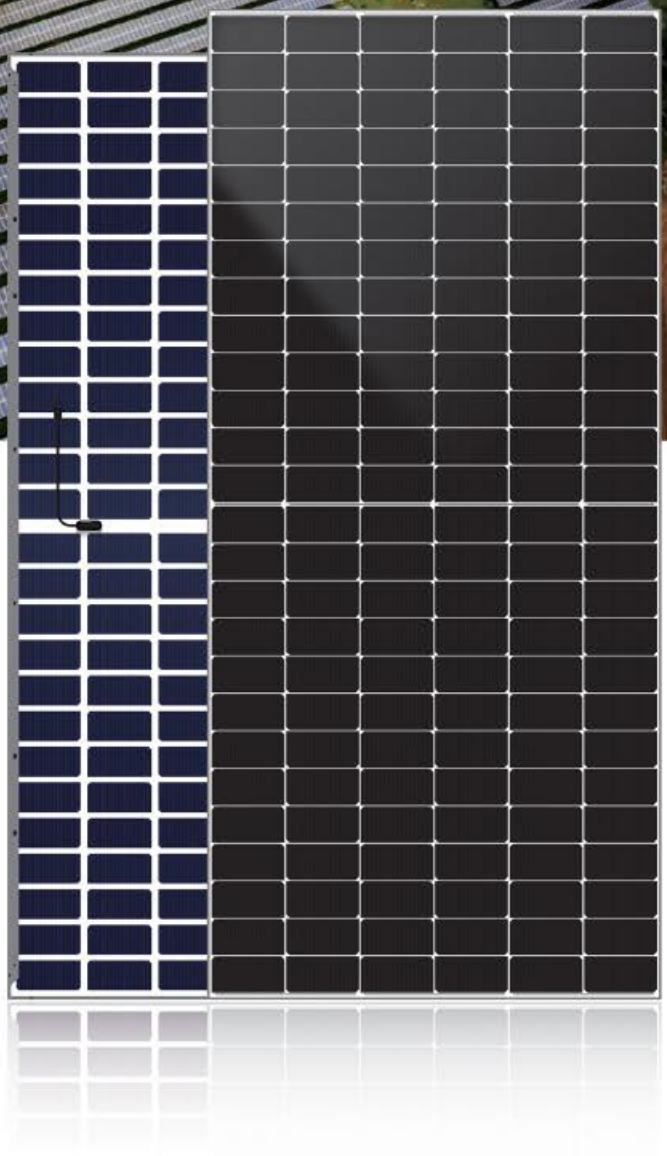
DHN-78X16/DG
620~640W
High Efficiency Double Glass PV Module



Comprehensive Products & System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO
ISO 45001
2018/International standards for occupational health & safety
ISO 14001
2015/Standards for environmental management system
ISO 9001
2015/Quality management system

15 Material & technology warranty

30 Linear power output warranty

TOPCon cells double-sided rate up to 85% and more back power generation by 5-25%

Double-glass Technology, higher encapsulation blocking and mechanical strength

Higher performance in anti hidden cracking, acid and alkali, salt spray, water vapor, UV, PID

TOPCon cells, lower attenuation, better temperature coefficient & dim light performance

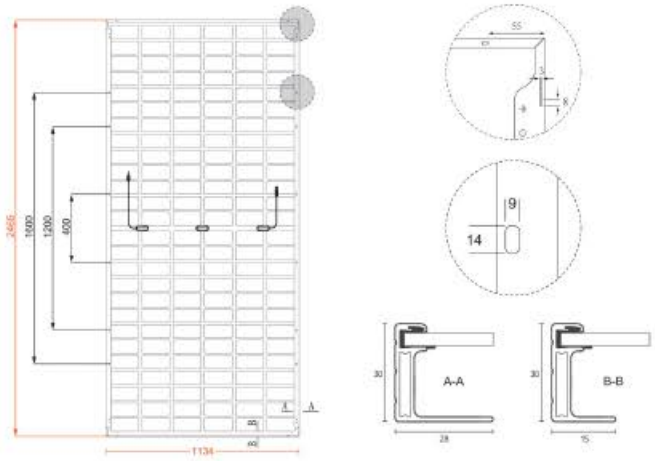
LECO laser assisted sintering technology, reduces contact resistance and improves efficiency by 0.2% -0.5%

Solar energy industry solutions

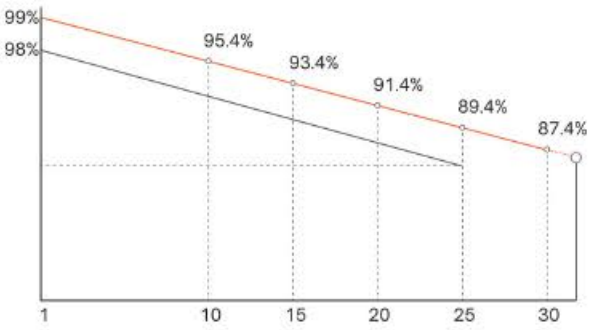
PERSOL

DHN-78X16/DG 620~640W

Design



30-Year Linear Power Output Warranty



— DAH Solar linear power output guarantee
— Standard linear power output guarantee

Mechanical Specification

No.of Cells	156 (6×26)
Weight	34.2kg
Cells Type	N-type 182×91mm
Dimension (L×W×T)	2465×1134×30mm
Packing	36pcs/Pallet, 576pcs/40HQ

Cable(Including connector)	4.0mm², 300/200mm in length, length can be customized
Glass	2.0mm High Transmission, Antireflection Coating
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible

Electrical Characteristics

Module Type	DHN-78X16/DG									
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	620	466	625	470	630	474	635	478	640	481
Open-circuit Voltage (Voc/V)	55.6	52.8	55.8	53.0	56.0	53.2	56.2	53.4	56.4	53.6
Maximum Power Voltage (Vmp/V)	46.8	44.5	47.0	44.7	47.2	44.8	47.4	45.0	47.6	45.2
Short-circuit Current (Isc/A)	14.08	11.37	14.14	11.42	14.20	11.46	14.26	11.51	14.32	11.56
Maximum Power Current (Imp/A)	13.25	10.49	13.30	10.53	13.35	10.57	13.40	10.60	13.45	10.64
Module Efficiency (STC)	22.18%		22.36%		22.54%		22.72%		22.90%	
Refer Bifacial Factor	80±5%									

STC-Standard Test Environment: Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5
NOCT-Standard Test Environment: Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s

Double-Sided Power Generation Parameters (Rear gain)

5%	Maximum Power (Pmax)	651	656.25	661.5	666.75	672
	Module Efficiency (%)	23.29	23.48	23.66	23.85	24.04
15%	Maximum Power (Pmax)	713	719	725	730	736
	Module Efficiency (%)	25.51	25.71	25.92	26.12	26.33
25%	Maximum Power (Pmax)	775	781	788	794	800
	Module Efficiency (%)	27.73	27.95	28.17	28.40	28.62

Operating Parameters

Maximum System Voltage	1500V DC
Operating Temperature	-40 ~ +85°C
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45°C±2°C
Application Level	Class A

Temperature Coefficient

Temperature Coefficient of Isc (αIsc)	0.046%/°C
Temperature Coefficient of Voc (βVoc)	-0.25%/°C
Temperature Coefficient of Pmax (γPmp)	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa

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TIER 1
BloombergNEF

DHN-66Y18/DG
700~725W
Double Glass PV Module

Comprehensive Products & System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO
ISO 45001
2018/International standards for occupational health & safety
ISO 14001
2015/Standards for environmental management system
ISO 9001
2015/Quality management system

15 Material & technology warranty

30 Linear power output warranty

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TOPCon cells, lower attenuation, better temperature coefficient & dim ligh performance

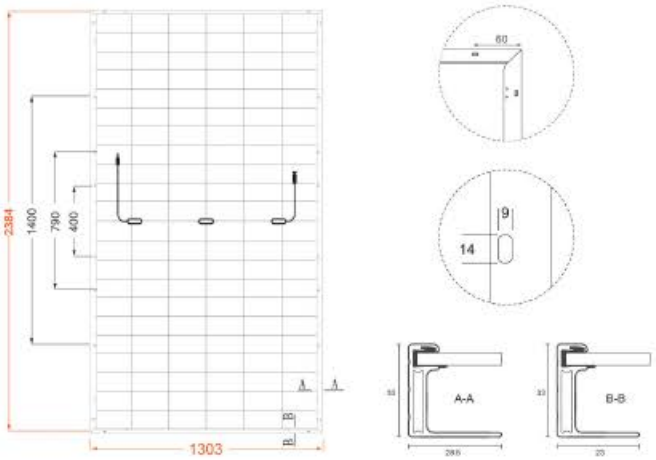
LECO laser assisted sintering technology, reduces contact resistance and improves efficiency by 0.2% -0.5%

Solar energy industry solutions

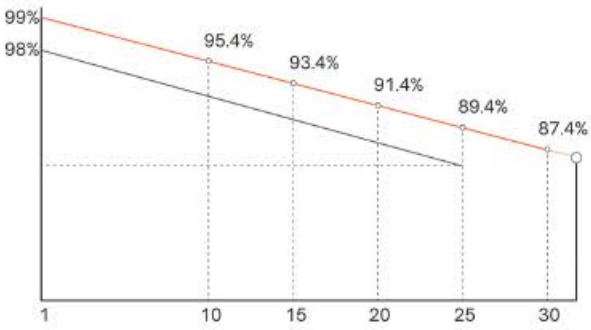
PERSOL

DHN-66Y18/DG 700~725W

Design



30-Year Linear Power Output Warranty



— DAH Solar linear power output guarantee
— Standard linear power output guarantee

Mechanical Specification

No.of Cells	132 (6×22)
Weight	36.7kg
Cells Type	N-type 210×105mm
Dimension (L×W×T)	2384×1303×33mm
Packing	33pcs/Pallet, 594pcs/40HQ

Cable(Including connector)	4.0mm², 300/200mm in length, length can be customized
Glass	2.0mm High Transmission, Antireflection Coating
Junction Box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible

Electrical Characteristics

Module Type	DHN-66Y18/DG											
Test conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	700	528	705	531	710	535	715	539	720	543	725	546
Open-circuit Voltage (Voc/V)	47.6	45.2	47.8	45.4	48.0	45.6	48.2	45.8	48.4	46.0	48.6	46.2
Maximum Power Voltage (Vmp/V)	40.0	38.0	40.2	38.2	40.4	38.4	40.6	38.6	40.8	38.8	41.0	39.0
Short-circuit Current (Isc/A)	18.49	14.93	18.55	14.98	18.61	15.02	18.67	15.07	18.73	15.12	18.79	15.17
Maximum Power Current (Imp/A)	17.50	13.88	17.54	13.91	17.57	13.94	17.61	13.97	17.65	14.00	17.68	14.03
Module Efficiency (STC)	22.53%		22.70%		22.86%		23.02%		23.18%		23.34%	
Refer Bifacial Factor	80±5%											

STC-Standard Test Environment: Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5
NOCT-Standard Test Environment: Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s

Double-Sided Power Generation Parameters (Rear gain)

5%	Maximum Power (Pmax)	735	740	746	751	756	761
	Module Efficiency (%)	23.7	23.8	24.0	24.2	24.3	24.5
10%	Maximum Power (Pmax)	805.0	810.8	816.5	822.3	828.0	833.8
	Module Efficiency (%)	25.9	26.1	26.3	26.5	26.7	26.8
20%	Maximum Power (Pmax)	875.0	881.3	887.5	893.8	900.0	906.3
	Module Efficiency (%)	28.2	28.4	28.6	28.8	29.0	29.2

Operating Parameters

Maximum System Voltage	1500V DC
Operating Temperature	-40 ~ +70°C
Maximum Series Fuse Rating	35A
Nominal Operating Cell Temperature	45°C±2°C
Application Level	Class A

Temperature Coefficient

Temperature Coefficient of Isc (αIsc)	0.046%/°C
Temperature Coefficient of Voc (βVoc)	-0.25%/°C
Temperature Coefficient of Pmax (γPmp)	-0.29%/°C
Snow load, frontside / Wind load, backside	5400Pa/2400Pa

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JA SOLAR

Harvest the Sunshine

630W

JAM66D45 LB n-type Double Glass Bifacial Modules

Premium Cells

n-Bycium+ 16BB

MBB Half-Cell Technology

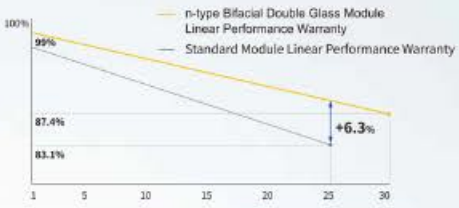
26%

Up To

Cell Conversion Efficiency

Premium Modules

- Higher power generation better LCOE
- n-type with very Lower LID
- Better Temperature Coefficient
- Better low irradiance response



1% 1st-year Degradation 0.4% Annual Degradation Over 30 years

12 12-year product warranty

30 30-year linear power output warranty

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing

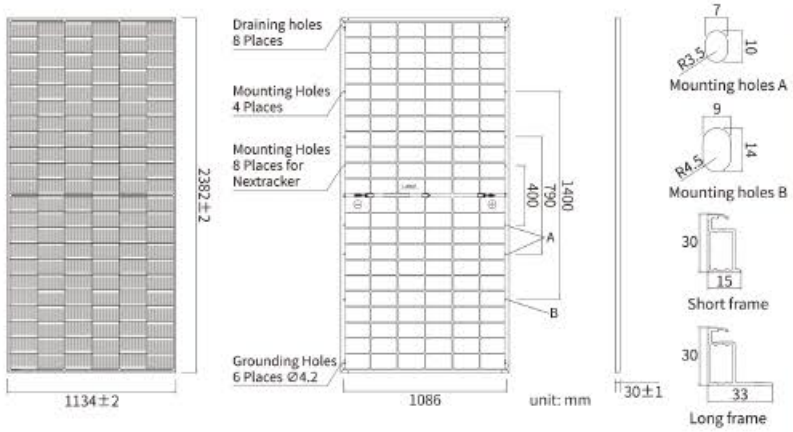
DEEP BLUE 4.0 Pro

Solar energy industry solutions

PERSOL

JAM66D45 LB n-type Double Glass Bifacial Modules

DEEP BLUE 4.0 Pro



MECHANICAL PARAMETERS

Cell	Mono
Weight	33.1kg
Dimensions	2382±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm²(IEC), 12 AWG(UL)
No. of cells	132(6×22)
Junction Box	IP68, 3diodes
Connector	QC 4.10-351/ MC4-EVO2A
Cable Length (Including Connector)	Portrait: 300mm(+) /400mm(-) Landscape: 1500mm(+)/1500mm(-)
Front Glass/Back Glass	2.0mm/2.0mm
Packaging Configuration	36pcs/Pallet, 720pcs/40HQ Container

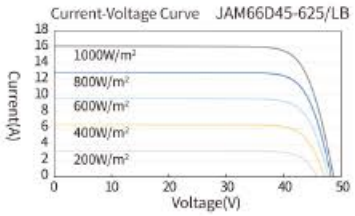
Remark: customized frame color and cable length available upon request

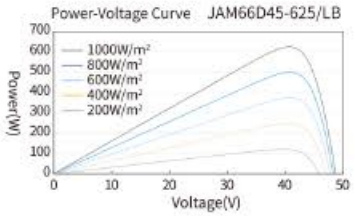
ELECTRICAL PARAMETERS AT STC

TYPE	JAM66D45 -605/LB	JAM66D45 -610/LB	JAM66D45 -615/LB	JAM66D45 -620/LB	JAM66D45 -625/LB	JAM66D45 -630/LB
Rated Maximum Power(Pmax) [W]	605	610	615	620	625	630
Open Circuit Voltage (Voc) [V]	47.90	48.10	48.30	48.50	48.70	48.90
Maximum Power Voltage(Vmp) [V]	39.60	39.77	39.96	40.21	40.45	40.70
Short Circuit Current(Isc) [A]	16.00	16.05	16.10	16.13	16.15	16.18
Maximum Power Current(Imp) [A]	15.28	15.34	15.39	15.42	15.45	15.48
Module Efficiency [%]	22.4	22.6	22.8	23.0	23.1	23.3
Power Tolerance	0~+3%					
Temperature Coefficient of Isc/α_Isc)	+0.045%/°C					
Temperature Coefficient of Voc (β_Voc)	-0.250%/°C					
Temperature Coefficient of Pmax(γ_Pmp)	-0.290%/°C					
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.
They only serve for comparison among different module types.

CHARACTERISTICS





ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

TYPE	JAM66D45 -605/LB	JAM66D45 -610/LB	JAM66D45 -615/LB	JAM66D45 -620/LB	JAM66D45 -625/LB	JAM66D45 -630/LB
Rated Max Power(Pmax) [W]	653	659	664	670	675	680
Open Circuit Voltage(Voc) [V]	47.90	48.10	48.30	48.50	48.70	48.90
Max Power Voltage(Vmp) IV]	39.60	39.77	39.96	40.21	40.45	40.70
Short Circuit Current(Isc) [Al	17.28	17.33	17.39	17.42	17.44	17.47
Max Power Current(Imp) [A]	16.50	16.56	16.62	16.65	16.69	16.72
Irradiation Ratio (rear/front)	10%					

* For Nextracker installations, maximum static load please take compatibility approve letter between JA Solar and Nextracker for reference.

OPERATING CONDITIONS

Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	35A
Maximum Static Load, Front*	5400Pa(112 lb/ft²)
Maximum Static Load, Back*	2400Pa(50 lb/ft²)
NOCT	45±2°C
Bifaciality	80%±5%
Safety Class	Class II
Fire Performance	UL Type 29/Class C

JA SOLAR

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Version No. : Global-EN-20241105A

JA SOLAR

Harvest the Sunshine

720W

JAM66D46 LB n-type Double Glass Bifacial Modules

Premium Cells

n-Bycium+ 18BB

MBB Half-Cell Technology

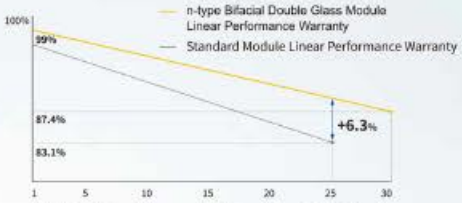
26%

Up To

Cell Conversion Efficiency

Premium Modules

- Higher power generation better LCOE
- n-type with very Lower LID
- Better Temperature Coefficient
- Better low irradiance response



1% 1st-year Degradation

0.4% Annual Degradation Over 30 years

12 12-year product warranty

30 30-year linear power output warranty

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing

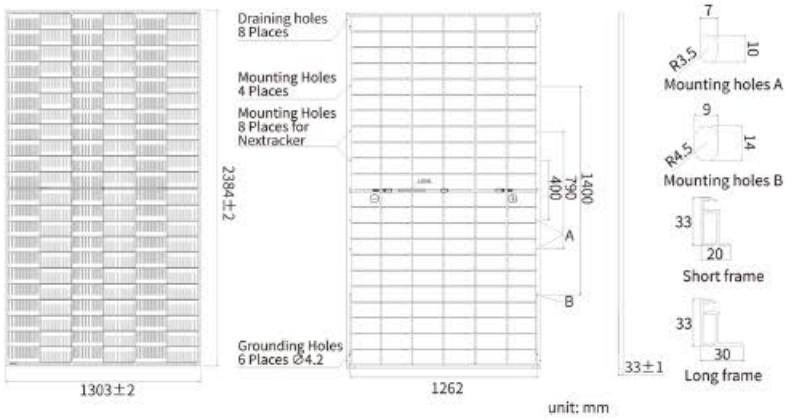
DEEP BLUE 4.0 Pro

Solar energy industry solutions

PERSOL

JAM66D46 LB n-type Double Glass Bifacial Modules

DEEP BLUE 4.0 Pro



MECHANICAL PARAMETERS

Cell	Mono
Weight	38.2kg
Dimensions	2384±2mm×1303±2mm×33±1mm
Cable Cross Section Size	4mm²(IEC), 12 AWG(UL)
No. of cells	132(6×22)
Junction Box	IP68, 3diodes
Connector	QC 4.10-351/ MC4-EVO2A
Cable Length (Including Connector)	Portrait: 300mm(+) /400mm(-) Landscape: 1500mm(+)/1500mm(-)
Front Glass/Back Glass	2.0mm/2.0mm
Packaging Configuration	33pcs/Pallet, 594pcs/40HQ Container

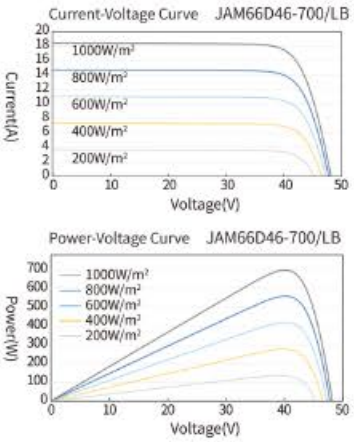
Remark: customized frame color and cable length available upon request

ELECTRICAL PARAMETERS AT STC

TYPE	JAM66D46 -695/LB	JAM66D46 -700/LB	JAM66D46 -705/LB	JAM66D46 -710/LB	JAM66D46 -715/LB	JAM66D46 -720/LB
Rated Maximum Power(Pmax) [W]	695	700	705	710	715	720
Open Circuit Voltage (Voc) [V]	48.00	48.20	48.40	48.60	48.80	49.00
Maximum Power Voltage(Vmp) [V]	40.22	40.42	40.61	40.80	41.00	41.19
Short Circuit Current(Isc) [A]	18.39	18.43	18.47	18.51	18.55	18.59
Maximum Power Current(Imp) [A]	17.28	17.32	17.36	17.40	17.44	17.48
Module Efficiency [%]	22.4	22.5	22.7	22.9	23.0	23.2
Power Tolerance	0~+3%					
Temperature Coefficient of Isc/α_Isc)	+0.045%/°C					
Temperature Coefficient of Voc (β_Voc)	-0.250%/°C					
Temperature Coefficient of Pmax(γ_Pmp)	-0.290%/°C					
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.
They only serve for comparison among different module types.

CHARACTERISTICS



ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

TYPE	JAM66D46 -695/LB	JAM66D46 -700/LB	JAM66D46 -705/LB	JAM66D46 -710/LB	JAM66D46 -715/LB	JAM66D46 -720/LB
Rated Max Power(Pmax) [W]	751	756	761	767	772	778
Open Circuit Voltage(Voc) [V]	48.00	48.20	48.40	48.60	48.80	49.00
Max Power Voltage(Vmp) [V]	40.22	40.42	40.61	40.80	41.00	41.19
Short Circuit Current(Isc) [A]	19.86	19.90	19.95	19.99	20.03	20.08
Max Power Current(Imp) [A]	18.66	18.71	18.75	18.79	18.84	18.88
Irradiation Ratio (rear/front)	10%					

* For Nextracker installations, maximum static load please take compatibility approve letter between JA Solar and Nextracker for reference.

OPERATING CONDITIONS

Maximum System Voltage	1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	35A
Maximum Static Load, Front*	5400Pa(112 lb/ft²)
Maximum Static Load, Back*	2400Pa(50 lb/ft²)
NOCT	45±2°C
Bifaciality	80%±5%
Safety Class	Class II
Fire Performance	UL Type 29/Class C

JA SOLAR

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E-mail: sales@jasolar.com marketing@jasolar.com www.jasolar.com

Version No. : Global-EN-20241105A

YINGLI SOLAR

panda 3.0 Plus 1

720W

MAXIMUM MODULE EFFICIENCY

23.2%

POSITIVE POWER TOLERANCE

0~+5W

N

N-type TOPCon Bifacial Module

IMPROVED POWER
NEVER SETTLE FOR LESS

- Backside Yield
- Wide Applications
- Superior Yield
- Outstanding Bifaciality (+W/m²)
- Excellent Durability

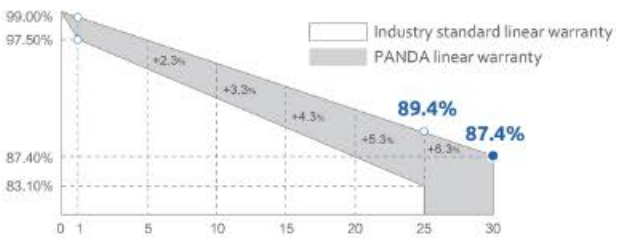
30 YEAR POWER WARRANTY

12 YEAR PRODUCT WARRANTY

Yingli Solar Website

QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, CE
ISO 9001: Quality management systems
ISO 14001: Environmental management systems
IEC 62941: Quality system for PV module manufacturing
ISO 45001: Occupational health and safety management systems



1.00% the 1st year power degradation
0.40% annual power degradation

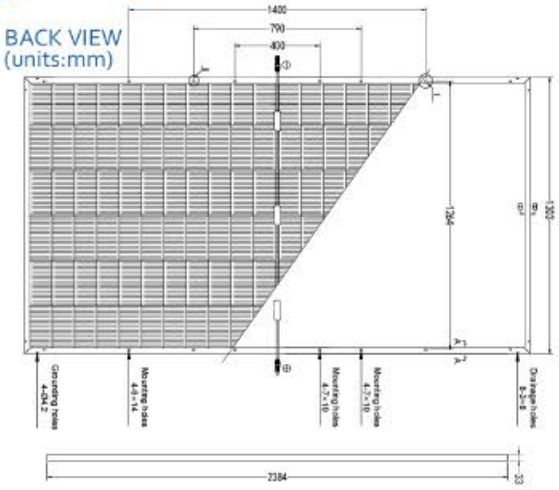
Solar energy industry solutions

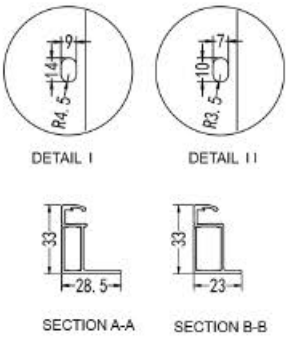
PERSOL

panda 3.0 Plus 1

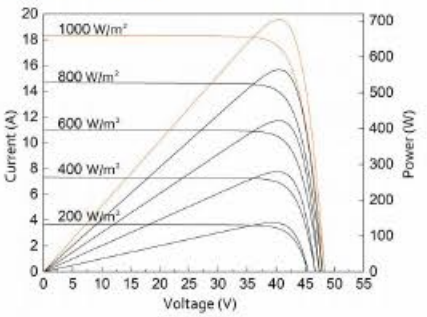
YINGLI SOLAR

BACK VIEW
(units:mm)





I-V / P-V CURVES



Warning: Read the Installation and User Manual in its entirety before handling, installing and operating Yingli Solar modules.

Electrical Parameters at Standard Test Conditions (STC*)

Module type	YLxxxCF66 f/2 (xxx=Pmax)					
Power output-Pmax (W)	695	700	705	710	715	720
Power output tolerances– ΔPmax (W)	0 / + 5					
Module efficiency-ηm (%)	22.4	22.5	22.7	22.9	23.0	23.2
Voltage at Pmax - Vmpp (V)	40.40	40.55	40.70	40.85	41.00	41.15
Current at Pmax-Impp (A)	17.21	17.27	17.33	17.39	17.44	17.50
Open-circuit voltage-Voc (V)	47.90	48.10	48.30	48.50	48.70	48.90
Short-circuit current-Isc (A)	18.26	18.30	18.34	18.38	18.42	18.46

*STC: 1000 W·m⁻² irradiance, 25℃ cell temperature, AM 1.5.

Electrical Parameters at Nominal Operating Cell Temperature (NOCT*)

Power output-Pmax (W)	529	533	536	540	544	548
Voltage at Pmax - Vmpp (V)	38.54	38.68	38.83	38.97	39.11	39.25
Current at Pmax-Impp (A)	13.72	13.77	13.82	13.86	13.90	13.95
Open-circuit voltage-Voc (V)	45.49	45.68	45.87	46.06	46.25	46.44
Short-circuit current-Isc (A)	14.71	14.74	14.78	14.81	14.84	14.87

*NOCT: open-circuit module operation temperature at 800 W·m⁻² irradiance, 20℃ ambient temperature, 1 m · s⁻¹ wind speed.

Bifacial Electrical Parameters at Standard Test Conditions(BNPI*)

Power output-Pmax (W)	770	776	782	787	792	798
Voltage at Pmax - Vmpp (V)	40.40	40.55	40.70	40.85	41.00	41.15
Current at Pmax-Impp (A)	19.07	19.14	19.20	19.27	19.32	19.39
Open-circuit voltage-Voc (V)	47.90	48.10	48.30	48.50	48.70	48.90
Short-circuit current-Isc (A)	20.23	20.28	20.32	20.37	20.41	20.45

*1000W·m⁻² on the front side and 135 W·m⁻² on the back side , 25℃ cell temperature, AM 1.5.
Bifaciality coefficient is 80% ± 5%.

Thermal Characteristics

Nominal operating cell temperature–NOCT(℃)	42±2
Temperature coefficient of Pmax– γ (% / ℃)	– 0.29
Temperature coefficient of Voc– β (% / ℃)	– 0.24
Temperature coefficient of Isc– α (% / ℃)	0.042

Packaging Specifications

Number of modules per pallet	33
Number of pallets per 40' container	17
Packaging box dimensions (L / W / H)	1340 mm / 1140 mm / 2500 mm
Box weight	1284 kg

Operating Conditions

Max. system voltage	1500 Vdc
Max. series fuse rating*	35 A
Operating temperature range	– 40℃~ 85℃
Max. static load, front (e.g., snow)	5400 Pa
Max. static load, back (e.g., wind)	2400 Pa
Max. hailstone impact (diameter / velocity)	25 mm / 23 m·s⁻¹

*Do not connect fuse in combiner box with two or more strings in parallel connection.

General Characteristics

Dimensions (L / W / H)	2384 mm / 1303 mm / 33 mm
Weight	37.3 kg

Construction Materials

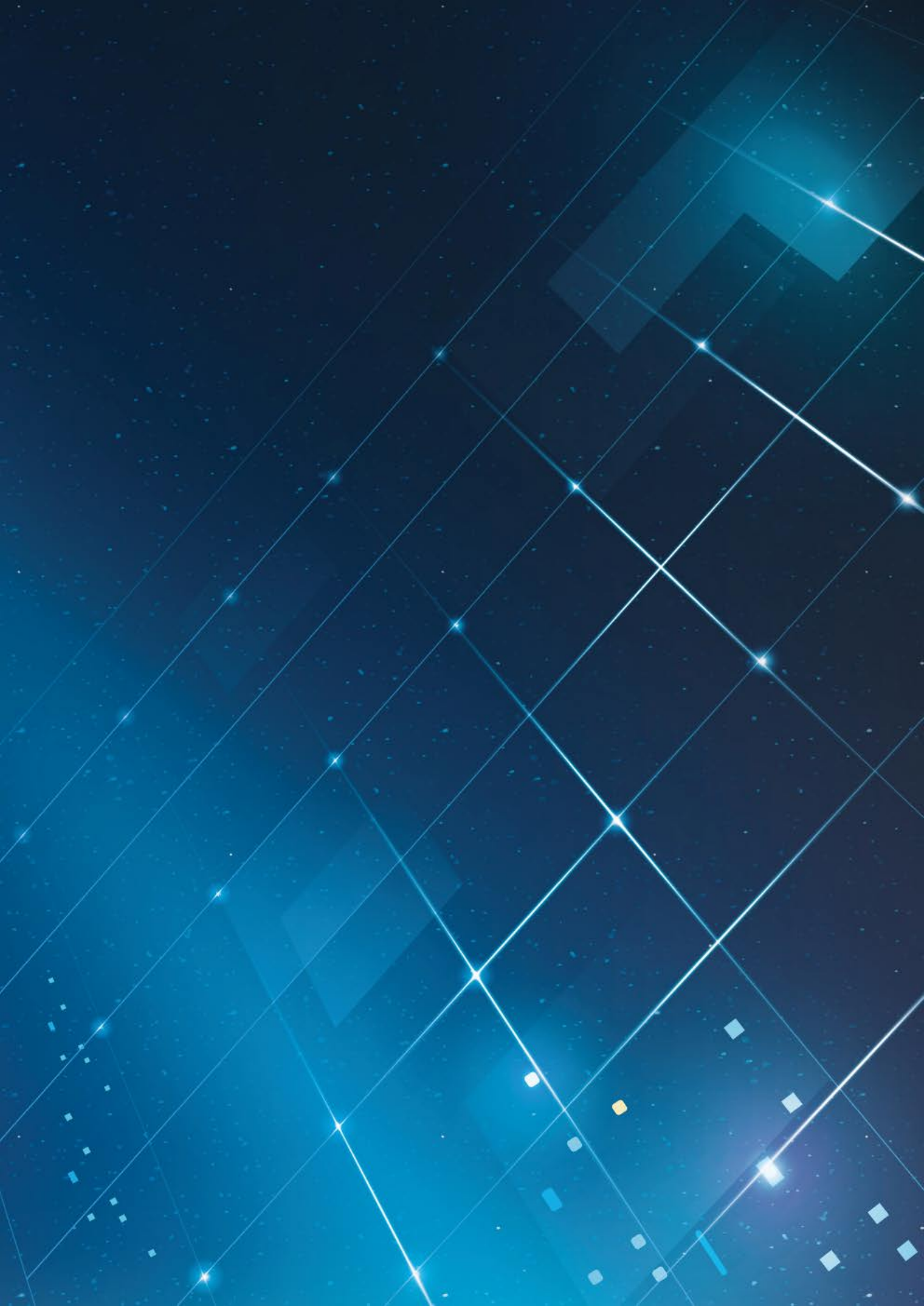
Cell (material / quantity)	n-type monocrystalline silicon / 6 x 22
Glass (thickness)	2.0 mm / 2.0 mm
Frame (material)	anodized aluminum alloy
Junction box (type / protection degree)	3 bypass diodes / ≥ IP68
Cable (length / cross-sectional area)	± 300 mm or customized length / 4 mm²

Yingli Solar Website

- Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly and are not guaranteed.
- The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.

service@yingli.com Tel: +86-312-8922216

Inverters



SP-320K-HB

SP Series String Inverter

More power generation

- Max. efficiency 99%, Euro efficiency 98.8%
- 6MPPTs for tracking maximum PV power
- Supports bifacial PV modules with max. MPPT current 75A

Low system cost

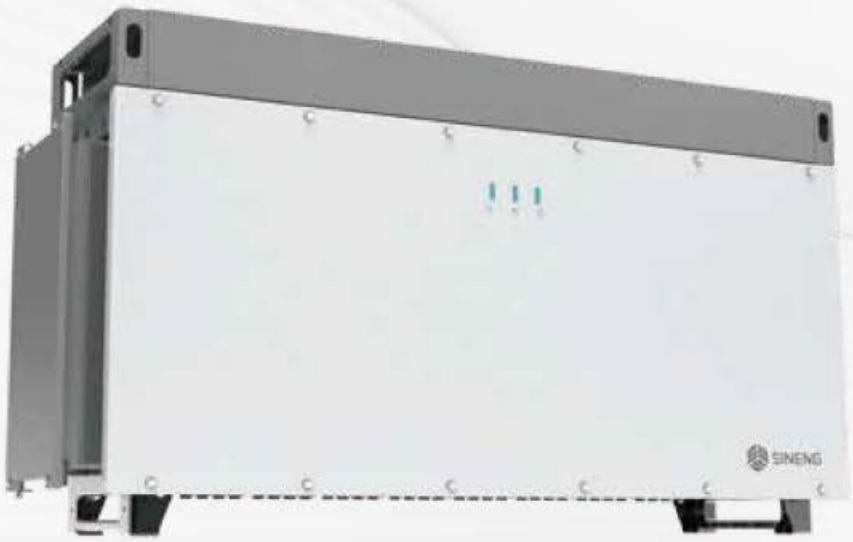
- Support 30 PV strings
- Support aluminum cable access, saving cable costs
- Support PLC communication, save communication cable

High reliability

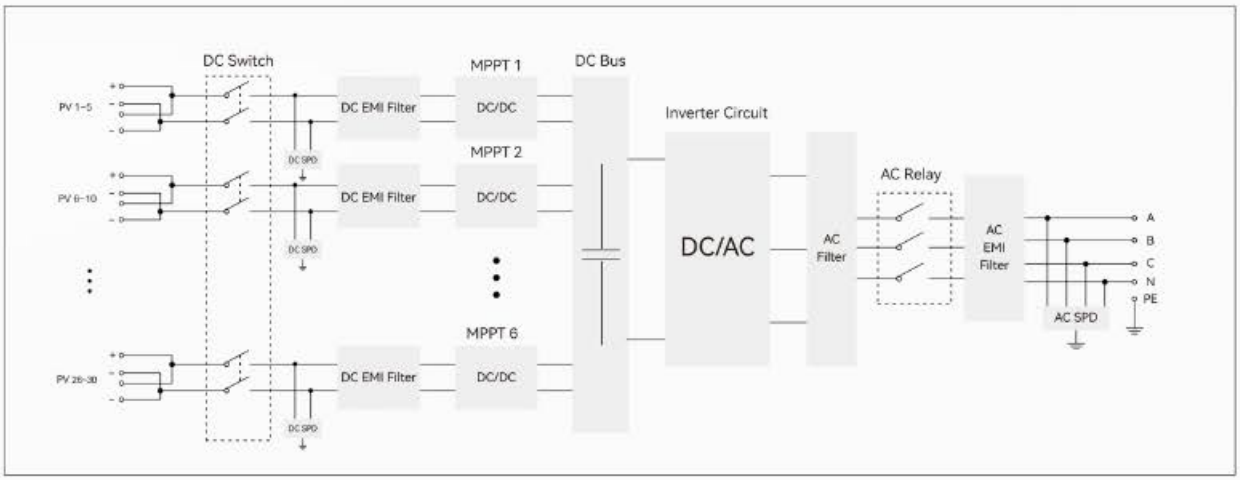
- Cooling fan with IP68 protection level
- Integrated string monitoring function
- Standard connection terminal for quick installation

Grid friendly

- LVRT and HVRT function
- Active & Reactive power control



Circuit Diagram



Model	SP-320K-HB
Input (DC)	
Max. PV input voltage	1500V
MPPT Max. input current	75A*6
Rated input voltage	1080V
MPP voltage range	500~1500V
MPP voltage range for nominal power	860~1300V
Number of MPPT trackers	6
Max. number of PV strings	30
Output (AC)	
AC output power	352kW@30℃/320kW@40℃
Max. output power	352kW
Rated grid voltage	800V
Grid voltage range	640~920V
Max. output current	254A
Rated grid frequency/range	50Hz/45~55Hz, 60Hz/55~65Hz
Output current harmonic (at nominal power)	<3%
Power factor at nominal power/range	>0.99/0.8leading to 0.8lagging
Protection	
DC reverse connection protection	Yes
Over voltage protection	DC Type II/AC Type II
Leakage current protection	Yes
Grid monitoring	Yes
Insulation monitoring	Yes
Anti-island protection	Yes
Efficiency	
Max. efficiency	99.0%
EU efficiency	98.8%
General Data	
Isolation method	Transformerless
Self-consuming in night	<3.5W
Protection level	IP66
Temperature	-30℃ ~ +60℃
Allowed humidity (non condensing)	0-100%
Cooling mode	Temperature controlled forced air cooling
Max.operating altitude	5000m
Communication port	Standard: PLC, Optional: RS485
Certificates and approvals (more available on request)	CE,IEC 62109, IEC 61727, IEC 61683, IEC 62116, IEC 60068, IEC61000
Dimensions (W×H×D)	1317×735×403mm
Weight	135kg

solis

GINLONG TECHNOLOGIES CO.,LTD.

S6-GU350K-EHV

Solis Three Phase Grid-Tied Inverters

Efficient

- 12/16 MPPTs, max. efficiency 99.0%
- > 150% DC/AC ratio
- Lower starting voltage, longer power generation time
- Wide MPPT current design, compatible with 182 and 210 series bifacial modules

Safe

- IP66, C5 Anti-Corrosion Level
- Built-in PID recovery for better module performance
- Fuse free design, safe and maintenance free

Smart

- Night SVG function
- Intelligent string monitoring, smart I-V curve scan
- Remote firmware upgrade with simple operation

Economic

- Power line communication (PLC) (optional)
- Integrated tracking bracket power supply interface

Models:

S6-GU350K-EHV-M12

S6-GU350K-EHV-M16

DATASHEET

S6-GU350K-EHV

Models	350K-M12	350K-M16
Input DC		
Max. input voltage	1500 V	
Rated voltage	1080 V	
Start-up voltage	500 V	
MPPT voltage range	480 - 1500 V	
Max. input current	12 × 40 A	16 × 30 A
Max. short circuit current	12 × 60 A	16 × 60 A
MPPT number / Max. input strings number	12 / 24	16 / 32
Output AC		
Rated output power	350 kW	
Max. apparent output power	350 kVA	
Rated grid voltage	3/PE, 800 V	
Grid voltage range	640 - 920 V	
Rated grid frequency	50 Hz / 60 Hz	
Max. output current	252.6 A	
Power factor	> 0.99 (0.8 leading - 0.8 lagging)	
THDi	< 3%	
Efficiency		
Max. efficiency	99.0%	
EU efficiency	98.7%	
Protection		
DC reverse-polarity protection	Yes	
Short circuit protection	Yes	
Output over current protection	Yes	
Surge protection	DC Type II / AC Type II	
Grid monitoring	Yes	
Anti-islanding protection	Yes	
Temperature protection	Yes	
Strings monitoring	Yes	
I/V Curve scanning	Yes	
Night time SVG function	Yes	
Integrated PID recovery	Yes	
Integrated DC switch	Yes	
General Data		
Dimensions (W × H × D)	1175 × 945.5 × 446 mm	
Weight	134 kg	143 kg
Topology	Transformerless	
Self-consumption (night)	< 3 W	
Operating ambient temperature range	-30 ~ +60°C	
Relative humidity	0 - 100%	
Ingress protection	IP66	
Cooling concept	Intelligent fan-cooling	
Max. operation altitude	4000 m	
Grid connection standard	EN50549, G99, AS4777.2, VDE0126, IEC61727, VDE4110, CEA 2019	
Safety / EMC standard	IEC62109-1/-2, EN61000-6-2/-4	
Features		
DC connection	MC4-EVO2 connector	
AC connection	OT terminal (max. 400 mm^2)	
Display	LED indicator & Bluetooth + APP	
Communication	RS485, Optional: PLC	

KSTAR

KSG SERIES THREE PHASE

G125KT7

PV On-Grid String Inverter

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

202401-V3

Solar energy industry solutions

PERSOL

Model	G125KT7
Input(DC)	
Max.DC Voltage	1100V
Max.Input Current Per MPPT	40A
Max.Short-circuit Current Per MPPT	60A
Start Voltage	350V
MPPT Voltage Range	200-1000V
Nominal Voltage	650V
Number of MPPT	8
Strings Per MPPT	2
Output(AC)	
Nominal AC Output Power	125kW
Max. AC Apparent Power	125kVA
Nominal AC Voltage	230V/400V,3W+PE,3W+N+PE
AC Grid Frequency Range	50/60Hz±5Hz
Max. Output Current	181.2A
Power Factor (cosΦ)	0.8leading-0.8lagging
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	965mm*700mm*355mm
Weight	85kg
Operating Temperature Range	-30~60℃
Cooling Type	Fan Cooling
Max. Operation Altitude	5,000 m (> 4,000 mDerating)
Max. Operating Humidity	0~100%
IP Class	IP66
Noise (dB)	≤75dB
Topology	Transformer less
Communication	RS485/PLC/WIFI/4G
Display	LED , Buletooth+APP

* Kstar is committed to continuous product innovation. Please be aware that parameters are subject to change without prior notice.
**For certificate requirements, please consult Kstar for more information.

KSTAR
Stock code: 002518

Add: 4/F, No.1 Bldg.Software Park, Keji C. Rd. 2nd, Hi-Tech Industrial Zone, Shenzhen 518057, P.R.China
Website: www.kstar.com E-mail: sales@kstar.com

KSTAR

KSG SERIES THREE PHASE

G50KT / G60KT / G70KT / G80KT

PV On-Grid String Inverter

- Max. PV Voltage up to 1100V
- 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

202401-V4

Solar energy industry solutions

PERSOL

MODEL	G50KT	G60KT	G70KT	G80KT
Input(DC)				
Max. DC Voltage	1100V	1100V	1100V	1100V
Nominal Voltage	650V	650V	650V	650V
Start Voltage	250V	250V	250V	250V
MPPT Voltage Range	200 V~1,000V	200 V~1,000V	200 V~1,000V	200 V~1,000V
Number of MPPT	4	4	4	4
Strings Per MPPT	2	2	3	3
Max. Input Current Per MPPT	32A	32A	45A	45A
Max. Short-circuit Current Per MPPT	48A	48A	60A	60A
Output(AC)				
Nominal AC Output Power	50000W	60000W	70000W	80000W
Max. AC Output Power	55000VA	66000VA	77000VA	88000VA
Nominal AC Voltage	400V 3L+N+PE			
AC Grid Frequency Range	50Hz / 60Hz(±5Hz)			
Maximum Output Current	79.7A	95.6A	111.6A	127.5A
Power Factor(Φ)	0.8leading-0.8lagging			
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	Yes			
DC/AC Surge Protection	Type II			
Residual Current Monitoring	Yes			
AC Short Circuit Protection	Yes			
General Specifications				
Dimensions W x H x D	515x585x287mm			
Weight	51kg		55kg	
Operating Temperature Range	-25℃~+60℃			
Cooling Type	Fan Cooling			
Max. Operating Altitude	4000m			
Max. Operating Humidity	0-100%(No Condensation)			
AC Output Terminal Type	OT terminal			
IP Class	IP66			
Topology	Transformer-less			
Communication	RS485/Wifi/4G			
Display	LCD			
Certification & Standard	EN/IEC62109-1;EN/IEC62109-2;IEC/EN 61000-6-1;IEC/EN 61000-6-3;IEC/EN61000-6-2;IEC/EN61000-6-4;IEC61683; IEC60068;IEC60529;IEC62116;IEC61727;EN50549-1;NC RfG;NRS 097;VDE-AR-N-4105;VDE0126;CEI0-21;C10/C11			

* Kstar is committed to continuous product innovation. Please be aware that parameters are subject to change without prior notice.

KSTAR

Stock code: 002518

Add: 4/F, No.1 Bldg.Software Park, Keji C. Rd. 2nd, Hi-Tech Industrial Zone, Shenzhen 518057, P.R.China

Website: www.kstar.com E-mail: sales@kstar.com

CPS ECB200KTL

1500Vdc PCS String Inverters

Energy Storage System

Key Features

- NFPA 70, NEC 2017 compliant
- Integrated DC disconnect switch
- Protection functions for enhanced reliability and safety
- Full power capacity up to 45°C
- IP65 outdoor rated
- Integrated DC-DC bi-directional converter
- Standard 5-year warranty with extension to 20 years
- Wide DC voltage range, suitable for different batteries
- Modular design, easy for maintenance

Model Name	CPS ECB200KTL
DC Parameter	
Max.DC Input Voltage	1500V
Min.DC Input Voltage	875V
Operating DC input Voltage Range	950~1500V
Max.DC Input Current	218A
Max.DC Input Power	207kW
DC Disconnection Type	Load-rated DC Switch
DC Surge Protection	Type II
AC Parameter	
Rated AC Output Power @ PF>0.99	200kVA / 200kW @ 45°C; 170kVA / 170kW @ 50°C
Rated Output Voltage	800Vac
Output Voltage Range	704~880Vac
Grid Connection Type	3-Phase / PE
Max. AC Output Current @ 800Vac	145A
Grid Frequency	50Hz / 60Hz
Grid Frequency Range	±5Hz
Power Factor	-1~+1
AC Current THD	<3%
DC Current Injection	<0.5% Inom
AC Surge Protection	Type II
System Parameter	
Max. Efficiency	98%
CEC Efficiency	97%
Dimensions (WxHxD)	29.5 x 13.1 x 33.5in / 750 x 332 x 850mm
Weight	120kg
Protection Degree	IP65
Cooling Method	Variable speed cooling fans
Operating Temperature Range	-30°C to +60°C (derating from +45°C)
Operating Humidity	0~100%
Operating Altitude	9842.5ft / 3000m (no derating)
Display and Communication	
User Interface and Display	LED indicators, WiFi + APP
PCS Inverter Monitoring	CAN / Ethernet / RS485
Safety	
Certifications and Standards	UL1741, CSA-22.2 NO.107.1-16, FCC Part 15, IEC 62109-1/2,IEC 62477-1, IEC 62040-1, IEC 61000-6-2/4
Selectable Grid Standard	IEEE1547-2018, IEEE1547.1-2010, EN50549-1/2, VED4110&4120, NTS2.1

* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.

SCH333/350K-T-EU

Three-Phase String Inverter
333/350kW • 15 MPPTs • 1500Vdc System

Efficient

Higher power generation

- 15 MPPTs with Max. Efficiency 99.0%
- Max. input current 20A per string, compatible with 700Wp+ module
- Superb temperature performance, full power at 45°C
- 150% DC/AC ratio

Smart

Fully controllable

- Comprehensive range of communication interfaces [PLC / Wi-Fi / RS485(Standard) & 4G / Ethernet(Optional)]
- Q at night (SVG) function
- Smart string monitoring based on I-V curve scanning and diagnosis

Safe

Superb quality with rapid response

- Durable and robust component
- Artfully designed air forced cooling system
- IP66&C5 protection
- Type II SPD for both DC and AC
- Full range of grid monitoring and protection
- Built-in anti-PID and PID recovery function
- Smart DC controllable switch, fast and automatic fault breaking

Model Name	SCH333K-T-EU	SCH350K-T-EU
DC Input		
Max. DC Voltage	1500Vdc	
MPPT Operating Voltage Range	500 - 1500Vdc	
Start Voltage	550Vdc	
Rated DC Voltage	1190Vdc	
Number of MPPT	15	15
Number of DC Connection Sets per MPPT	2	2
Max. input current per MPPT	40A	
Max. DC short-circuit current per MPPT	60A	
DC Disconnection Type	Integrated Switch	
AC Output		
Rated AC Power	333kW	350kW
Max. AC Power	333kVA	350kVA
Rated AC Voltage	800V	
AC Voltage Range*	680 - 880V	
Grid Connection Type	3 / N / PE	
Max. AC Current	241A	253A
Grid Frequency	50 / 60Hz	
Grid Frequency Range	45-55 / 55-65Hz	
Power Factor (cosφ)	>0.99(±0.8 adjustable)	
Current THD	< 3%	
System Data		
Topology	Transformerless	
Max. Efficiency	99.0%	
Euro Efficiency	98.8%	
Protection		
Anti-islanding Protection	Yes	
DC reverse polarity protection	Yes	
DC overvoltage protection	Yes	
Insulation resistance detection	Yes	
Residual Current Monitoring Unit	Yes	
Ground fault monitoring	Yes	
Surge Protection	DC Type II / AC Type II	
AC short circuit protection	Yes	
AC overvoltage protection	Yes	
Overheat protection	Yes	
PV string monitoring	Yes	
I-V curve scan&diagnosis	Yes	
PID prevent&recovery	Yes	
Q at night	Yes	
24h gird monitoring	Yes	
Environment Data		
Ingress Protection	IP66	
Cooling Method	Cooling Fans	
Operating Temperature	-30°C to +60°C	
Ambient Humidity	0 - 100%	
Altitude	4000m	
Display and Communication		
Display	LED + APP(Bluetooth)	
Communication	RS485/Ethernet/PLC/CAN	
Mechanical Data		
Dimensions (W*H*D)	1057 * 810 * 400mm	
Weight	143kg	
DC Connection Type	MC4 (Max. 6mm²)	
AC Connection Type	OT/DT Terminal(Max. 400mm²)	

*1 AC Power is different under different rated AC voltage.
*2 Please consult the local sales staff for detailed certification.
*3 For reference only. Chint Power reserve the right to alterations for the data above.

SCA100/125K-T-EU

Three-Phase String Inverter
100/125kW • 12 MPPTs • 1100Vdc System

Efficient

Appealing yield

- 12 MPPTs with Max. Efficiency 98.5%
- Easily compatible with various PV modules based on max. input current 30A per MPPT
- Superb temperature performance, full power at 45°C
- 150% DC/AC ratio

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Support zero export by meter+CT

Safe

Solid quality

- Durable and robust component
- IP66&C5 protection
- Type II SPD for both DC and AC

Model Name	SCA100K-T-EU	SCA125K-T-EU
DC Input		
Max. DC Voltage	1100Vdc	
MPPT Operating Voltage Range	200 - 950Vdc	
Start Voltage	300Vdc	
Rated DC Voltage	615Vdc	
Number of MPPT	12	
Number of DC Connection Sets per MPPT	2	
Max. input current per MPPT	30A	
Max. DC short-circuit current per MPPT	45A	
DC Disconnection Type	Integrated Switch	
AC Output		
Rated AC Power	100kW	125kW
Max. AC Power	110kVA	125kVA
Rated AC Voltage	380 / 400V	
AC Voltage Range[1]	322 - 528V	
Grid Connection Type	3 / N / PE	
Max. AC Current	167.2A	190A
Grid Frequency	50 / 60Hz	
Grid Frequency Range[1]	45-55 / 55-65Hz	
Power Factor (cosφ)	>0.99(±0.8 adjustable)	
Current THD	< 3%	
System Data		
Topology	Transformerless	
Max. Efficiency	98.11%	98.50%
Euro Efficiency	98.00%	98.10%
Protection		
Anti-islanding Protection	Yes	
DC reverse polarity protection	Yes	
DC overvoltage protection	Yes	
Insulation resistance detection	Yes	
Residual Current Monitoring Unit	Yes	
Ground fault monitoring	Yes	
AC short circuit protection	Yes	
AC overvoltage protection	Yes	
PV string monitoring	Yes	
Dry contact remote control	Yes	
I-V curve scan	Yes	
AFCI	Yes	
Surge Protection	DC Type II / AC Type II	
Environment Data		
Ingress Protection	IP66	
Cooling Method	Cooling Fans	
Operating Temperature	-30°C to +60°C	
Ambient Humidity	0 - 100%	
Altitude	4000m	
Display and Communication		
Display	LED + APP(Bluetooth)	
Communication	RS485/Wi-Fi (Standard) & 4G (Optional)	
Mechanical Data		
Dimensions (W*H*D)	1050 * 660 * 340.5mm	
Weight	90kg	
DC Connection Type	MC4 (Max. 6mm²)	
AC Connection Type	OT/DT Terminal(Max. 240mm²)	
Safety		
Certifications[2]	IEC61000, IEC/EN 62109, IEC61727/62116, EN50549, NC RFG, CEI 0-16, CEI 0-21, UNE217001, UNE 217002, NTS_V2.1, VDE-AR-N 4110, VDE-AR-N 4105, UTE-C15	

*1 AC Power is different under different rated AC voltage.
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*3 For reference only. Chint Power reserve the right to alterations for the data above.

SCA50/60K-T-EU

Three-Phase String Inverter
50/60kW • 4 MPPTs • 1100Vdc System

Efficient

Appealing yield

- 4 MPPTs with Max. Efficiency 98.49%
- Easily compatible with various PV modules based on max. input current 40A per MPPT
- 150% DC/AC ratio

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Smart fan cooling
- Support zero export by meter+CT

Safe

Solid quality

- Durable and robust component
- IP66 &C5 protection
- Type II SPD for both DC and AC

Model Name	SCA50K-T-EU	SCA60K-T-EU
DC Input		
Max. DC Voltage	1100Vdc	
MPPT Operating Voltage Range	200 - 1000Vdc	
Start Voltage	250Vdc	
Rated DC Voltage	620Vdc	
Number of MPPT	4	
Number of DC Connection Sets per MPPT	2	
Max. input current per MPPT	40A	
Max. DC short-circuit current per MPPT	50A	
DC Disconnection Type	Integrated Switch	
AC Output		
Rated AC Power	50kW	60kW
Max. AC Power	55kVA	66kVA
Rated AC Voltage	380 / 400V	
Grid Connection Type	3 / N / PE	
Max. AC Current	83.6A	100.3A
Grid Frequency	50 / 60Hz	
Grid Frequency Range*	45-55 / 55-65Hz	
Power Factor (cosφ)	>0.99(±0.8 adjustable)	
Current THD	< 3%	
System Data		
Topology	Transformerless	
Max. Efficiency*	98.49%	98.48%
Euro Efficiency*	98.44%	98.43%
Protection		
DC reverse connection protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
24h Grid monitoring	Yes	
Ground fault monitoring	Yes	
Surge Protection	DC Type II / AC Type II	
AFCI	Yes	
PID Recovery	Yes	
Environment Data		
Ingress Protection	IP66	
Cooling Method	Cooling Fans	
Operating Temperature	-30°C to +60°C	
Ambient Humidity	0 - 100%	
Altitude	4000m	
Display and Communication		
Display	LED + APP(Bluetooth)	
Communication	RS485 / Wi-Fi (Standard) & 4G / Ethernet (Optional)	
Mechanical Data		
Dimensions (W*H*D)	713 * 609 * 306mm	
Weight	50.5kg	
DC Connection Type	MC4 (Max. 6 mm²)	
AC Connection Type	OT/DT Terminal（Max.70 mm²）	

*1 "Grid Frequency Range" may be differ according to specific grid codes.
*2 The certificates are for reference only.Please consult the local sales staff for detailed certification.
*3 For reference only. Chint Power reserve the right to alterations for the data above.

SCA30/36K-T-EU

Three-Phase String Inverter
30/36kW • 3/4 MPPTs • 1100Vdc System

Efficient

Appealing yield

- 3/4 MPPTs with Max. Efficiency 98.73%
- Easily compatible with various PV modules based on max. input current 15A per string
- 150% DC/AC ratio
- Lower startup & wider MPPT voltage

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Support zero export by meter

Safe

Solid quality

- Durable and robust component
- IP66 &C5 protection
- Type II SPD for both DC and AC

Model Name	SCA30K-T-EU	SCA36K-T-EU
DC Input		
Max. DC Voltage	1100Vdc	
MPPT Operating Voltage Range	200 - 1000Vdc	
Start Voltage	250Vdc	
Rated DC Voltage	615Vdc	
Number of MPPT	3	4
Number of DC Connection Sets per MPPT	2	2
Max. input current per MPPT	30A	
Max. DC short-circuit current per MPPT	45A	
DC Disconnection Type	Integrated Switch	
AC Output		
Rated AC Power	30kW	36kW
Max. AC Power	33kVA	39.6kVA
Rated AC Voltage	380 / 400V	
AC Voltage Range[1]	277 - 520V	
Grid Connection Type	3 / N / PE	
Max. AC Current	50A	60A
Grid Frequency	50 / 60Hz	
Grid Frequency Range[1]	45-55 / 55-65Hz	
Power Factor (cosφ)	>0.99(±0.8 adjustable)	
Current THD	< 3%	
System Data		
Topology	Transformerless	
Max. Efficiency	98.15%	98.73%
Euro Efficiency	97.91%	98.05%
Protection		
DC reverse connection protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
24h Grid monitoring	Yes	
Ground fault monitoring	Yes	
Surge Protection	DC Type II / AC Type II	
AFCI	Yes	
Environment Data		
Ingress Protection	IP66	
Cooling Method	Cooling Fans	
Operating Temperature	-25°C to +60°C	
Ambient Humidity	0 - 100%	
Altitude	4000m	
Display and Communication		
Display	LED + APP(Bluetooth)	
Communication	RS485 / Wi-Fi (Standard) & 4G (Optional)	
Mechanical Data		
Dimensions (W*H*D)	684 * 488 * 269mm	
Weight	37kg	37.5kg
DC Connection Type	MC4 (Max. 6 mm²)	
AC Connection Type	OT/DT Terminal (Max.35 mm²)	
Safety		
Certifications[2]	IEC/EN 61000, IEC/EN 62109, IEC 61727, IEC 62116, IEC 63027, IEC 61683, RD 413, IEC/EN 62920, EN 55011, C10/11, CEI 0-21, EN50549-1/2, NC RfG, PTPiREE, NTS V2.1, RD 647, RD413, RD 1699, UNE 217002, UTE C15-712-1, DIN VDE 0126-1-1, VDE-AR-N 4105, DIN VDE V 0124, TOR Erzeuger Typ A/B	

*1 "AC Voltage Range" and "Grid Frequency Range" may be differ according to specific grid codes.
*2 The certificates are for reference only.Please consult the local sales staff for detailed certification.
*3 For reference only. Chint Power reserve the right to alterations for the data above.

SCA5~25K-T-EU

Three-Phase String Inverter
5~25kW • 2 MPPTs • 1100Vdc System

Efficient

Appealing yield

- 2 MPPTs with Max. Efficiency 98.12%
- Easily compatible with various PV modules based on max. input current 15A per string
- 150% DC/AC ratio
- Lower startup & wider MPPT voltage

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Support zero export by meter

Safe

Solid quality

- Durable and robust component
- IP66 &C5 protection
- Type II SPD for both DC and AC

Model Name	SCA5K-T-EU	SCA6K-T-EU	SCA8K-T-EU	SCA10K-T-EU	SCA15K-T-EU	SCA20K-T-EU	SCA25K-T-EU
DC Input							
Max. DC Voltage	1100Vdc						
MPPT Operating Voltage Range	200 - 1000Vdc						
Start Voltage	250Vdc						
Rated DC Voltage	600Vdc						
Number of MPPT	2						
Number of DC Connection Sets per MPPT	1					2	
Max. input current per MPPT	15A					30A	
Max. DC short-circuit current per MPPT	23A					45A	
DC Disconnection Type	Integrated Switch						
AC Output							
Rated AC Power	5kW	6kW	8kW	10kW	15kW	20kW	25kW
Max. AC Power	5.5kVA	6.6kVA	8.8kVA	11kVA	16.5kVA	22kVA	27.5kVA
Rated AC Voltage	380 / 400V						
AC Voltage Range1	277 - 520V						
Grid Connection Type	3 / N / PE						
Max. AC Current	8.4A	10A	13.4A	16.7A	25A	33.4A	41.7A
Grid Frequency	50 / 60Hz						
Grid Frequency Range1	45-55 / 55-65Hz						
Power Factor (cosφ)	>0.99(±0.8 adjustable)						
Current THD	< 3%						
System Data							
Topology	Transformerless						
Max. Efficiency	97.82%	97.87%	97.69%	97.66%	97.87%	97.87%	98.12%
Euro Efficiency	96.93%	96.96%	97.41%	97.41%	97.13%	97.42%	97.87%
Protection							
DC reverse connection protection	Yes						
AC short circuit protection	Yes						
Leakage current protection	Yes						
24h Grid monitoring	Yes						
Ground fault monitoring	Yes						
Surge Protection	DC Type II / AC Type II						
AFCI	Yes						
Environment Data							
Ingress Protection	IP66						
Cooling Method	Cooling Fans						
Operating Temperature	-25°C to +60°C						
Ambient Humidity	0 - 100%						
Altitude	2000m						
Display and Communication							
Display	LED + APP(Bluetooth)						
Communication	RS485 / Wi-Fi (Standard) & 4G (Optional)						
Mechanical Data							
Dimensions (W*H*D)	530 * 426 * 200mm						
Weight	22kg						
DC Connection Type	MC4 (Max. 6 mm²)						
AC Connection Type	OT/DT Terminal (Max.35 mm²)						
Safety							
Certifications2	IEC/EN 61000, IEC/EN 62109, IEC 61727, IEC 62116, IEC 63027, IEC 61683, IEC/EN 62920, EN 55011, C10/11, CEI 0-21, EN50549-1/2, NC RfG, PTPiREE, NTS V2.1, RD 647, RD413, RD 1699, UNE 217002, UTE C15-712-1, DIN VDE 0126-1-1, VDE-AR-N 4105, DIN VDE V 0124, TOR Erzeuger Typ A/B						

*1 "AC Voltage Range" and "Grid Frequency Range" may be differ according to specific grid codes.
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*3 For reference only. Chint Power reserve the right to alterations for the data above.

CPS SCA4.6~6KTL-PSM1/EU

Single-Phase String Inverter
4.6~6kW • 2 MPPTs • 550Vdc System

Efficient

Appealing yield

- 2 MPPTs with Max. Efficiency 97.2%
- Easily compatible with various PV modules based on max. input current 15A per MPPT
- 150% DC/AC ratio
- Lower startup & wider MPPT voltage

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Support zero export by meter

Safe

Solid quality

- Durable and robust component
- IP65 &C5 protection
- Type II SPD for both DC and AC

Model Name	CPS SCA4.6KTL-PSM1/EU	CPS SCA5KTL-PSM1/EU	CPS SCA6KTL-PSM1/EU
DC Input			
Max. DC Voltage		550Vdc	
MPPT Operating Voltage Range		70-540Vdc	
Start Voltage		90Vdc	
Rated DC Voltage		360Vdc	
Number of MPPT		2	
Number of DC Connection Sets per MPPT		1	
Max. input current per MPPT		15A	
Max. DC short-circuit current per MPPT		20A	
DC Disconnection Type		Integrated Switch	
AC Output			
Rated AC Power	4.6kW	5kW	6kW
Max. AC Power	5.06kVA	5.5kVA	6kVA
Rated AC Voltage		220/230V	
AC Voltage Range[1]		160 - 300V	
Grid Connection Type		L/N/PE	
Max. AC Current	23A	25A	27.3A
Grid Frequency		50/60Hz	
Grid Frequency Range[1]		45-55/55-65Hz	
Power Factor (cosφ)		>0.99(±0.8 adjustable)	
Current THD		< 3%	
System Data			
Topology		Transformerless	
Max. Efficiency	97.2%	97.2%	97.2%
Euro Efficiency	96.0%	96.2%	96.3%
Protection			
DC reverse connection protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
Grid monitoring		Yes	
Ground fault monitoring		Yes	
Surge Protection		DC Type II / AC Type II	
AFCI		Yes	
Environment Data			
Ingress Protection		IP65	
Cooling Method		Natural Convection	
Operating Temperature		-25°C to +60°C	
Ambient Humidity		0 - 100%	
Altitude		4000m	
Display and Communication			
Display		LED + APP(Bluetooth)	
Communication		RS485/Wi-Fi (Standard) & 4G (Optional)	
Mechanical Data			
Dimensions (W*H*D)		350 * 347 * 137mm	
Weight		8.6kg	
DC Connection Type		MC4 (Max. 6mm²)	
AC Connection Type		Plug and play connector	
Safety			
Certifications[2]		EN 61000-6,EN/IEC 62109,IEC 61727,IEC 62116,VDE 4105,CEI 0-21,EN50549-1,VDE0126-1-1,NTS type A, UNE 217002,RD 647, UNE 217001,INMETRO PORTARIA Nº 140,AS4777.2	

*1 AC Power is different under different rated AC voltage.
*2 The certificates are for reference only.Please consult the local sales staff for detailed certification.
*3 For reference only. Chint Power reserve the right to alterations for the data above.

CPS SCA2~3.6KTL-PS1/EU

Single-Phase String Inverter
2~3.6kW • 1 MPPT • 500Vdc System

Efficient

Appealing yield

- 1 MPPT with Max. Efficiency 97.3%
- Easily compatible with various PV module based on max. input current 15A per MPPT
- 150% DC/AC ratio
- Lower startup & wider MPPT voltage

Smart

Pragmatic option

- Communication interfaces [RS485/ Wi-Fi (Standard) & 4G (Optional)]
- Built-in Bluetooth and App for local and remote monitoring
- Support zero export by meter

Safe

Solid quality

- Durable and robust component
- IP65 &C5 protection
- Type II SPD for both DC and AC

Model Name	CPS SCA2KTL-PS1/EU	CPS SCA3KTL-PS1/EU	CPS SCA3.6KTL-PS1/EU
DC Input			
Max. DC Voltage		500Vdc	
MPPT Operating Voltage Range		50-490Vdc	
Start Voltage		70Vdc	
Rated DC Voltage		360Vdc	
Number of MPPT		1	
Number of DC Connection Sets per MPPT		1	
Max. input current per MPPT		15A	
Max. DC short-circuit current per MPPT		20A	
DC Disconnection Type		Integrated Switch	
AC Output			
Rated AC Power	2kW	3kW	3.6kW
Max. AC Power	2.2kVA	3.3kVA	3.6kVA
Rated AC Voltage		220/230V	
AC Voltage Range[1]		160 - 300V	
Grid Connection Type		L/N/PE	
Max. AC Current	10A	15A	16A
Grid Frequency		50/60Hz	
Grid Frequency Range[1]		45-55/55-65Hz	
Power Factor (cosφ)		>0.99(±0.8 adjustable)	
Current THD		< 3%	
System Data			
Topology		Transformerless	
Max. Efficiency	97.3%	97.3%	97.3%
Euro Efficiency	95.9%	96.3%	96.5%
Protection			
DC reverse connection protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
Grid monitoring		Yes	
Ground fault monitoring		Yes	
Surge Protection		DC Type II / AC Type II	
AFCI		Yes	
Environment Data			
Ingress Protection		IP65	
Cooling Method		Natural Convection	
Operating Temperature		-25°C to +60°C	
Ambient Humidity		0 - 100%	
Altitude		4000m	
Display and Communication			
Display		LED + APP(Bluetooth)	
Communication		RS485/Wi-Fi (Standard) & 4G (Optional)	
Mechanical Data			
Dimensions (W*H*D)		320 * 344 * 137mm	
Weight		6.6kg	
DC Connection Type		MC4 (Max. 6mm²)	
AC Connection Type		Plug and play connector	
Safety			
Certifications[2]		EN 61000-6,EN/IEC 62109,IEC 61727,IEC 62116,VDE 4105,CEI 0-21,EN50549-1,VDE0126-1-1,NTS type A, UNE 217002,RD 647, UNE 217001,INMETRO PORTARIA Nº 140,AS4777.2	

*1 AC Power is different under different rated AC voltage.
*2 The certificates are for reference only.Please consult the local sales staff for detailed certification.
*3 For reference only. Chint Power reserve the right to alterations for the data above.

ECH8~20K-TH-EU

Three Phase Residential Hybrid Inverter

High Return

- Max efficiency 98.3%, Battery efficiency 97.5%
- 5 basic modes to meet the needs of various scenarios
- Smart TOU mode, further increasing revenue

High Capability

- Up to 40kW output power in backup port with grid supply
- Save cost of separating loads, freedom of electricity in case of power failure
- Supports SG Ready heat pump and smart load control
- Three-phase unbalance capacity, single-phase up to 50% of rated power

High Protection

- Standard AFCI to protect your home
- Built-in Type II SPD on DC side
- IP66 protection for challenging environments

Model	ECH8K-TH-EU	ECH10K-TH-EU	ECH12K-TH-EU	ECH15K-TH-EU	ECH18K-TH-EU	ECH20K-TH-EU
Efficiency						
Max. Efficiency (PV to Grid)	98.20%	98.30%	98.30%	98.30%	98.30%	98.30%
Eur.Efficiency (PV to Grid)	97.50%	97.60%	97.70%	97.70%	97.70%	97.70%
Max. Efficiency (Battery to Load)	97.50%	97.50%	97.80%	97.80%	97.80%	97.80%
PV						
Rated Input Voltage	600V	600V	600V	600V	600V	600V
Max. Input Voltage	1100V	1100V	1100V	1100V	1100V	1100V
Max. Input Power	12.80kW	16.00kW	19.20kW	24.00kW	28.80kW	30.00kW
Max. Input Current per MPPT	16A/16A/16A/16A	16A/16A/16A/16A	16A/16A/16A/16A	16A/16A/16A/16A	16A/16A/16A/16A	16A/16A/16A/16A
Max.Short Circuit Current per MPPT	24A/24A/24A/24A	24A/24A/24A/24A	24A/24A/24A/24A	24A/24A/24A/24A	24A/24A/24A/24A	24A/24A/24A/24A
No. of MPPTs	4	4	4	4	4	4
No. of Strings per MPPT	1	1	1	1	1	1
Start Input Voltage	160V	160V	160V	160V	160V	160V
PV Operating Voltage Range	160-1000V	160-1000V	160-1000V	160-1000V	160-1000V	160-1000V
Battery						
Battery Type	Lithium-ion/Lead-Acid					
Battery Voltage Range	160-600V	160-600V	160-600V	160-600V	160-600V	160-600V
Max. Charge/Discharge Curren	50A/50A	50A/50A	50A/50A	50A/50A	50A/50A	50A/50A
Max. Charge/Discharge Power	20kW/8kW	20kW/10kW	20kW/12kW	20kW/15kW	20kW/18kW	20kW/20kW
Grid						
Max. Input Current	60.8A	60.8A	60.8A	60.8A	60.8A	60.8A
Rated Output Apparent Power	8.0kVA	10.0kVA	12.0kVA	15.0kVA	18.0kVA	20.0kVA
Max. Output Apparent Power	8.8kVA	11.0kVA	13.2kVA	16.5kVA	19.8kVA	20.0kVA
Rated Output Voltage	3W / N / PE; 220 / 380 3W / N / PE; 230 / 400 3W / N / PE; 240 / 415 adjustable					
Rated Grid Frequency	50Hz/60Hz					
THDI	<3% (Rated Power)					
Power Factor	> 0.99 Rated power (Adjustable 0.8 Leading - 0.8Lagging)					
Backup Port						
Max. Output Current (On Grid)	60.8A	60.8A	60.8A	60.8A	60.8A	60.8A
Max. Output Apparent Power (On Grid)	40.0kVA	40.0kVA	40.0kVA	40.0kVA	40.0kVA	40.0kVA
Max. Output Apparent Power (Off Grid)	8.8kVA	11.0kVA	13.2 kVA	16.5kVA	19.8kVA	20.0kVA
Peak Output Apparent Power	22kVA @60s	22kVA @60s	22kVA @60s	22kVA @60s	22kVA @60s	22kVA @60s
Rated Output Voltage	380V/400V/415V, 3W+N+PE					
Rated Output Frequency	50Hz/60Hz					
Max. Output Single Phase Apparent Power	4.0kVA	5.0kVA	6.0kVA	7.5kVA	9.0kVA	9.0kVA
THDV	<2% @100% R Load					
Switching Time	10ms	10ms	10ms	10ms	10ms	10ms
Protection						
DC Switch	Support					
Anti-islanding Protection	Support					
AC Overcurrent Protection	Support					
AC Short Circuit Protection	Support					
PV String Reverse Protection	Support					
Surge protection	AC Type II, DC Type II					
AFCI	Support					
RSD Function	Option					
General						
Topology	Non-Isolated					
IP Rating	IP66					
Cooling	Forced airflow					
Operating Temperature Range	-25°C-60°C					
Relative Humidity Range	0-100%					
Max. Operating Altitude	4000m					
Noise (Typical)	<45dB					
Dimensions (W*H*D)	≈580/500/250mm					
Weight	≈37kg					
Display	LED&APP					
Communication	RS485,CAN, WIFI/4G(optional)					
Certification						
Safety	IEC62109-1&2, IEC61000, IEC 62477, IEC61727/62116, IEC 61683, IEC63027					
Grid Code	EN50549, VDE4105, Tor erzeuger typeA+R25 Tor erzeuger type B, EIFS2018-2, CEI 021, NC RfG, PTPiREE, EN50549-1					

* The certificates are for reference only. Please consult the local sales staff for detailed certification.

ECH3~6K-SML-EU

Single Phase Residential Hybrid Inverter

High Return

- Max efficiency 97.4%, Battery efficiency 95.1%
- 5 basic modes to meet the needs of various scenarios
- Smart TOU mode, further increasing revenue

High Capability

- Up to 12kW output power in backup port with grid supply
- Save cost of separating loads, freedom of electricity in case of power failure
- Supports SG Ready heat pump and smart load control

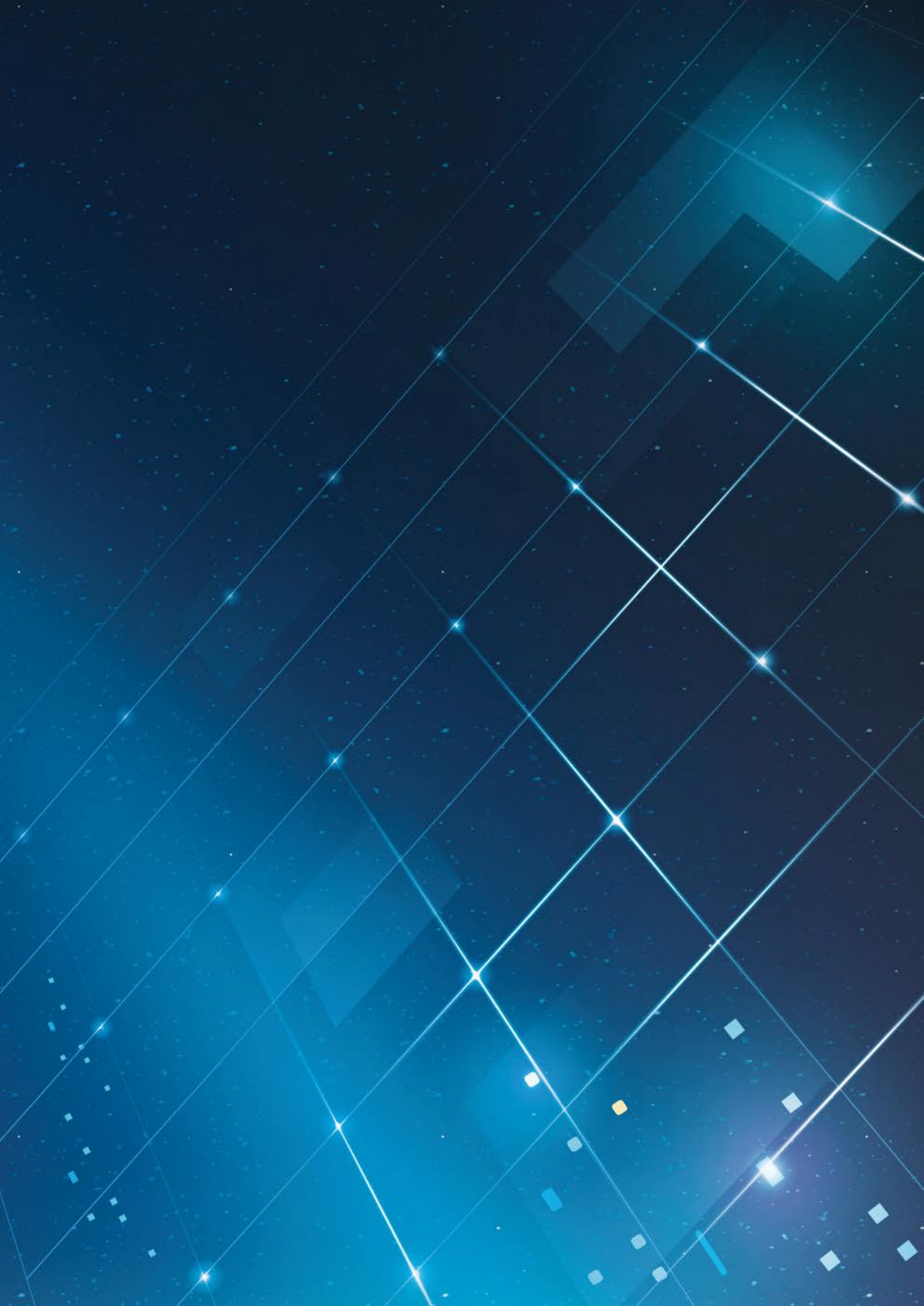
High Protection

- Standard AFCI to protect your home
- Built-in Type II SPD on DC side
- IP66 protection for challenging environments

Model	ECH3K-SML-EU	ECH3.6K-SML-EU	ECH4.6K-SML-EU	ECH5K-SML-EU	ECH6K-SML-EU
Efficiency					
Max. Efficiency (PV to Grid)	97.40%	97.40%	97.40%	97.40%	97.40%
Eur.Efficiency (PV to Grid)	96.50%	96.50%	96.80%	96.80%	96.70%
Max. Efficiency (Battery to Load)	95.10%	95.10%	95.10%	95.10%	95.10%
PV					
Rated Input Voltage	360V	360V	360V	360V	360V
Max. Input Voltage	600V	600V	600V	600V	600V
Max. Input Power	9.00kW	9.68kW	10.60kW	10.80kW	10.80kW
Max. Input Current per MPPT	16/16A	16/16A	16/16A	16/16A	16/16A
Max.Short Circuit Current per MPPT	20/20A	20/20A	20/20A	20/20A	20/20A
No. of MPPTs	2	2	2	2	2
No. of Strings per MPPT	1	1	1	1	1
Start Input Voltage	100V	100V	100V	100V	100V
PV Operating Voltage Range	80-550V	80-550V	80-550V	80-550V	80-550V
Battery					
Battery Type	Lithium-ion/Lead-Acid				
Battery Voltage Range	40-60V	40-60V	40-60V	40-60V	40-60V
Max. Charge/Discharge Current	120/60A	120/75A	120/95A	120/120A	120/120A
Max. Charge/Discharge Power	6.0/3.0kW	6.0/3.6kW	6.0/4.6kW	6.0/5.0kW	6.0/6.0kW
Grid					
Max. Input Current	54.6A	54.6A	54.6A	54.6A	54.6A
Max. Input Apparent Power from Utility Grid	12.0kVA	12.0kVA	12.0kVA	12.0kVA	12.0kVA
Rated Output Apparent Power	3.00kVA	3.68kVA	4.60kVA	5.00kVA	6.00kVA
Max. Output Apparent Power	3.3kVA	4.0kVA	4.6kVA	5.5kVA	6.0kVA
Rated Output Voltage	L/N/PE~220/230V				
AC Voltage Range	176-276V(Adjustable)				
Rated Grid Frequency	50Hz/60Hz				
THDI	<3%(Rated Power)				
Power Factor	> 0.99 Rated power (Adjustable 0.8 Leading - 0.8Lagging)				
Backup Port					
Max. Output Current On Grid	54.6A	54.6A	54.6A	54.6A	54.6A
Max. Output Apparent Power On Grid	12.0kVA	12.0kVA	12.0kVA	12.0kVA	12.0kVA
Peak Output Apparent Power	4.5kVA @60s	5.4kVA @60s	6.9kVA @60s	7.5kVA @60s	9kVA @60s
Rated Output Apparent Power Off Grid	3.00kVA	3.68kVA	4.60kVA	5.00kVA	6.00kVA
Max. Output Apparent Power Off Grid	3.3kVA	4.0kVA	4.6kVA	5.5kVA	6.0kVA
Rated Output Voltage	220/230V	220/230V	220/230V	220/230V	220/230V
Rated Output Frequency	50Hz/60Hz				
THDV	<2%(Linear load)				
Switching Time	10ms				
Protection					
DC Switch	Support	Support	Support	Support	Support
Anti-islanding Protection	Support	Support	Support	Support	Support
AC Overcurrent Protection	Support	Support	Support	Support	Support
AC Overvoltage Protection	Support	Support	Support	Support	Support
PV String Reverse Protection	Support	Support	Support	Support	Support
Surge Protection	AC Type II, DC Type II				
Insulation Detection	Support	Support	Support	Support	Support
Leakage Current Protection	Support	Support	Support	Support	Support
AFCI	Support	Support	Support	Support	Support
RSD Function	Option	Option	Option	Option	Option
General					
Topology	High Frequency Isolation (Battery)				
IP Rating	IP66	IP66	IP66	IP66	IP66
Cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Operating Temperature Range	-25°C-60°C	-25°C-60°C	-25°C-60°C	-25°C-60°C	-25°C-60°C
Relative Humidity Range	0-100%	0-100%	0-100%	0-100%	0-100%
Max. Operating Altitude	4000m				
Noise (Typical)	<35dB	<35dB	<35dB	<35dB	<35dB
Dimensions (W*H*D)	460*460*203mm	460*460*203mm	460*460*203mm	460*460*203mm	460*460*203mm
Weight	26kg	26kg	26kg	26kg	26kg
Display	LED&APP	LED&APP	LED&APP	LED&APP	LED&APP
Communication	RS485,CAN, WIFI/4G(optional)				
Certification					
Safety	IEC/EN62109-1&2, IEC/EN62477-1, IEC/EN61727 / 62116, IEC/EN61000-6-1/2/3, IEC 61683, IEC63027				
Grid Code	VDE 4105, CEI 0-21, EN 50549-1, PTPiREE+NCRfG, NTS 2.1, 217001, 217002				

* The certificates are for reference only. Please consult the local sales staff for detailed certification.

MV Stations



CHINT

Empower the World

CHINT GLOBAL

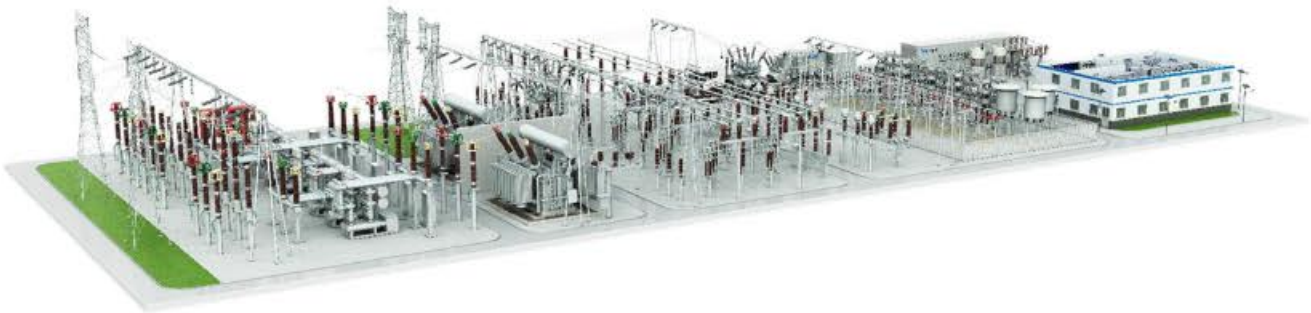
LIGHT UP BOUNDLESS POSSIBILITIES
IN E-LIFE

2024

Power T&D

The product series basically covers more than 2000 varieties of 150 series of 750kV and below voltage grade.

Fuse | Insulator | SA | HV CB | HV GIS | Power Transformer | CT&PT | Disconnector | MV&LV Switchgear | Try-type Transformer | Power Capacitor



Solar energy industry solutions

PERSOL

Transformers and Reactors

750kV Oil-immersed Transformer

500kV Oil-immersed Transformer

220kV Oil-immersed Transformer

110kV Oil-immersed Transformer

400kV Oil-immersed Shunt Reactor

Product Ranges

Power Transformers
- Oil-immersed up to 1000kV
- Pad-mounted Transformers

Reactors up to 500kV

Special Transformers:
Mining/Furnace/Traction/rectifier

Natural ester (vegetable oil) transformers
up to 750KV

Distribution Transformers (Dry type and oil type)

10-35kV Oil-immersed Transformer

10-35kV Dry-type Transformer

Product Ranges

Products Characteristic

Oil-immersed up to 35kV:

Silicon steel core (S series), low noise. Amorphous core (SH series) low loss.

The use of fully sealed corrugated fuel tank, maintenance free.

Mineral oil transformer cost-effective ,Natural ester insulating oil transformer (vegetable oil transformer) safety, fire prevention, environmental protection.

Dry-type up to 35kV:

High mechanical strength, strong resistance to short circuit, small partial discharge, good thermal stability, high reliability.

Low loss, low noise.

Good heat dissipation performance, strong overload operation ability, the capacity can be increased when forced air cooling.

Good fire prevention performance

KSTAR

GSM5000D-MV/6250D-MV

DC1500V Turnkey Solution

DC 1500V Turnkey Solution

- Max. PV Voltage up to 1500V
  DC/AC Ratio up to 1.8
- AGC/AVC Night SVG Function
  LVRT/HVRT/FRT Function
- Max. 48 DC Inputs
  IP54 Outdoor Protection
- Modular Design for Easy Maintenance
  Full Power Output Nnder 50℃

Solar energy industry solutions

PERSOL

MODEL	GSM5000D-MV	GSM6250D-MV
Input(DC)		
Max. DC Input Voltage	1500Vdc	
Min./Start Voltage	860V/940V(adjustable)	
MPPT Voltage Range	875~1300V	
No. of MPPT	4	
No. of DC Input	Max. 36 (24,28,32 optional)	
Max. DC Input Current	8018A	
Output(AC)		
Rated AC Output Power	5000kW	6250kW
Max. AC Output Power	5500kVA	6876kW
Inverter Max. Output Current	5293A	6616A
AC Output Voltage	10~35kV	
Rated Grid Frequency	50/60Hz	
AC Grid Frequency Range	45~55/55~65(adjustable)	
Power Factor (cosΦ)	0.8leading~0.8lagging	
THDi	<3%	
Efficiency		
Inverter Max. Efficiency	99.00%	
Inverter Euro Efficiency	98.70%	
Transformer		
Transformer Rated Power	5000kVA	6250kVA
Transformer Max. Power	5500kVA	6876kVA
LV/MV Voltage	0.6kV-0.6kV/(10~35)kV	
Vector Group	Dy11y11 or Dy11	
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)mm	12192*2896*2438	
Weight(t)	29	
IP Class	Inverter IP55/Others IP54	
Auxiliary Power Supply	5kVA	
Operating Ambient Temperature Range	-40 ~ +60℃	
Operating Relative Humidity Range	0~100%	
Max. Operating Altitude	1000m (Standard)	
Cooling Method	Forced Air Cooling	
Communication	Standard: Modbus RS485, Optional: IEC104 Optical Fiber	
Display	Touch Screen	

*Specifications subject to change without prior notice.

KSTAR
Stock code: 002518

Add: 4/F, No.1 Bldg.Software Park, Keji C. Rd. 2nd, Hi-Tech Industrial Zone, Shenzhen 518057, P.R.China
Website: www.kstar.com E-mail: sales@kstar.com

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

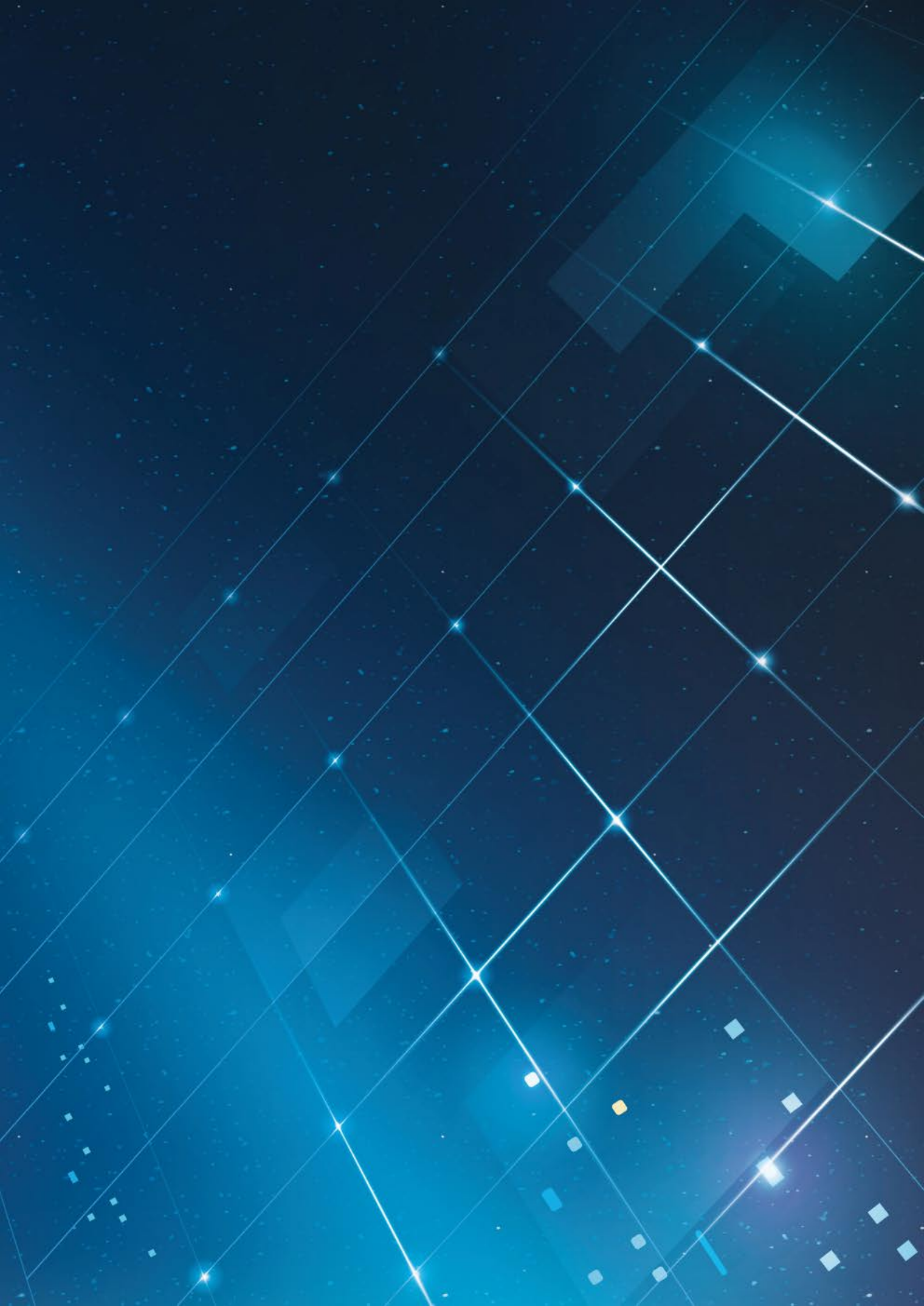
Turnkey solution for large-scale PV plants

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	

Storage Systems



CPS ES-1.6MW/3.34MWh-EU

All In One Liquid Cooling Energy Storage System

Energy Storage System

Key Features

- All in one design, without on-site installation and commissioning
- 6 battery racks, modular PCS etc. are integrated in a 20ft container
- Rack-level management allows the racks to run independently, eliminating the mismatch between parallel racks
- Old and new batteries can be mixed
- Modular design, minimizing the impact of faults and O&M cost, easy to expand
- Intelligent liquid-cooling system, ensures longer battery cycle life

Model Name	CPS ES-0.8MW/1.6MWh-EU	CPS ES-1.2MW/2.5MWh-EU	CPS ES-1.6MW/3.34MWh-EU
DC Parameter			
Rated Voltage	1331.2Vdc		
Battery Voltage Range	1164.8~1497.6Vdc		
Nominal Battery Energy	1672kWh	2508kWh	3344kWh
AC Parameter			
Rated AC Output Power	800kW	1200kW	1600kW
Rated AC Output Voltage	800V		
Output Voltage Range	704V~880V		
Grid Frequency	50Hz / 60Hz		
Grid Frequency Range	±5Hz		
System Parameter			
Protection Degree	IP54		
Cooling Method	PCS: Air Cooling, Batteries: Liquid Cooling		
Operation Temperature	-25°C~55°C		
Operating Humidity	0-95%, non-condensing		
Operating Altitude	≤3000m (derating from 2000m)		
Dimensions (WxHxD)	238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm		
Weight(T)	<30T		
Display and Communication			
Communication	Ethernet/CAN/RS485		
Safety			
Compliance	Battery: IEC 62477 / IEC 61000 / IEC 62619 / IEC 63056 PCS: UL1741, CSA-22.2 NO.107.1-16, IEEE1547-2018, FCC Part 15, IEC61000, IEC62477, IEC62109, EN50549, VDE 4110&4120, NTS2.1		

* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.

CPS PSA4.8MW -EU

Energy Storage System

Energy Storage System

Key Features

- 4.8MW Skid, with high power integration density
- PCS has IP66 protection degree, suitable for C5 environment
- Standard 20-foot container integration, pre-assembled and pre-adjusted in the factory, convenient for transportation and installation
- AC 800V output, compatible with photovoltaic and energy storage coupling solutions
- Wide DC voltage range, suitable for various batteries
- Modular design of the PCS, easy to maintain and expand

Model Name	CPS PSA4.8MW -EU
DC Parameter	
Max.DC Input Voltage	1500V
Min.DC Input Voltage	875V
Operating DC input Voltage Range	950~1500V
Max.DC Input Current	24 x 218A
DC Disconnection Type	Load-rated DC Switch
AC Parameter	
Rated AC Output Power @ PF>0.99	24 x 200kW
Rated Output Voltage	800V
Output Voltage Range	704~880V
Grid Connection Type	3-Phase / PE
Max. AC Output Current @ 800Vac	24 x 145A
Grid Frequency / Grid Frequency Range	50Hz / 60Hz (±5Hz)
Power Factor	-1~+1
AC Current THD	<3%
DC Current Injection	<0.5% Inom
AC Surge Protection	Type II
System Parameter	
Dimensions (WxHxD)	238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm
Weight	<12T
Enclosure Protection Degree	IP54
Cooling Method	Variable speed cooling fans
Operating Temperature Range	-30°C to +60°C (derating from +45°C)
Operating Humidity	0~95%
Operating Altitude	9842.5ft / 3000m (no derating)
Display and Communication	
Communication	CAN / Ethernet / RS485
Safety	
Certifications and Standards	UL1741, CSA-22.2 NO.107.1-16, FCC Part 15, IEC 62109-1/2,IEC 62477-1, IEC 62040-1, IEC 61000-6-2/4
Selectable Grid Standard	IEEE1547-2018, IEEE1547.1-2010, EN50549-1/2, VED4110&4120, NTS2.1
* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.	

CPS ES-5015KWH

Battery Energy Storage System

Energy Storage System

Key Features

- Fully integrated system with minimum on-site installation and commission efforts
- High energy density: 5 MWh in one 20ft container Multiple-point electrical linkage measures
- Easy to expand with CPS's modular and string design
- Integrated fast-acting fault protection
- Comprehensive fire prevention design to ensure system safety
- Smart cooling control to improve battery performance and lifecycle

Model Name	CPS ES-5015KWH
Battery Parameter	
Battery Capacity	5015.96kWh
Battery Cell	314Ah
Pack Configuration	1P52S
Battery Configuration	12 x 1P416S
Rate Voltage	1331.2V
Operating Voltage Range	1164~1497V
Maximum Power	2508kW
System Parameter	
Protection Degree	IP54
Cooling Method	Liquid Cooling
Operation Temperature	-25°C~50°C
Operating Humidity	0-95%, non-condensing
Operating Altitude	≤6561.7ft / 2000m
Dimensions (WxHxD)	238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm
Weight	43T
Communication	RS485/Ethernet / CAN
Protocol	Modbus RTU / Modbus TCP / CAN
Auxiliary Power Input	3P+N 400Vac / 50kVA
Safety	
Compliance	IEC 62477 / EC 61000 / IEC 62619 / IEC 63056

* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.

CPS ES-9.6MW/20MWh-EU

Utility Energy Storage System

Energy Storage System

Key Features

- Pre-assembled system design with standard container transportation for the entire unit
- Battery, PCS, and transformer compartmentalized design for isolating faults and flexible combination
- Equipment supply with in-factory pre-assembly and testing for quick grid connection on-site
- Maximum 9.6MW system matrix to reduce equipment quantity and lower system costs
- One cluster, one management design to eliminate inter-cluster circulating currents, ensuring high system availability
- Custom design for ease of maintenance and expansion
- High protection design for the system, ensuring adaptability to various environmental conditions

Model Name	CPS ES-9.6MW/20MWh -EU
Model Name (Battery Container, PCS Skid, PMVS transformer)	Battery Container: CPS ES-5015KWH-EU PCS Skid: CPS PSA4.8MW-EU PMVS: CPS PSA9.6MO
Battery Parameter	
Battery Capacity	4x5MWh
Battery Cell	LFP 314Ah
Pack Configuration	1P52S
Battery Configuration	4x12P416S
Rate Voltage	1331.2V
Operating Voltage Range	1164~1497V
PCS Parameter	
Rated AC Output Power @ PF>0.99	2 x 24 x 200kW
Operating DC input Voltage Range	950~1500V
Output Voltage	800Vac (704~880Vac)
Grid Connection Type	3-Phase/PE
Max. AC Output Current @ 800Vac	145A
Nominal Grid Frequency / Grid Frequency	50Hz/60Hz (±5Hz)
DC/AC Surge Protection	Type II
PMVS Parameter	
Rated Input Voltage	800V
Rated AC Output Power	9.6MW
Medium Voltage Rating	13.8kV,15kV, 20kV, 30kV, 33kV, 34.5kV
Grid Frequency	50Hz / 60Hz
Vector Group	Dy11-y11
Cooling Method	ONAN
Surge Protection	Type II
System Parameter	
Protection Degree	PCS Skid: IP54; Battery Container: IP54; PMVS: IP54
Cooling Method	PCS Skid: Variable speed cooling fans, Batteries :Liquid Cooling; PMVS:ONAN
Operating Temperature Range	-20°C to 50°C (derating from +45°C)
Operating Altitude	PCS: 9842.5ft / 3000m (no derating); Battery Container ≤6562ft / 2000m; PMVS≤3281ft / 1000m
Operating Humidity	0-95%, non-condensing
PCS Skid Weight	12T
Battery Container Weight	4x43T
PMVS Weight	<30T
Dimensions (WxHxD)	238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm
Display and Communication	
Communication	RS485 / Ethernet / CAN
Communication protocol	Modbus-TCP / RTU
Safety	
Certifications and Standards	Battery: IEC 62477/IEC 61000 / IEC 62619 / IEC 63056 PCS: UL1741, CSA-22.2 NO.107.1-16, IEEE1547-2018, FCC Part 15, IEC61000, IEC62477, IEC62109, EN50549, VDE 4110&4120, NTS2.1 PMVS: IEC 62271-202, IEC 50708-3, IEC 62271-200, IEC 61439-2

* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.

CPS ES-2MW/2.4MW-EU 2/4h

Utility Energy Storage System

Energy Storage System

Key Features

- Fully integrated system with minimum on-site instllation and commission efforts
- High energy density: 5MWh in one 20ft container, 2.4MW PCS skid in one 20ft container
- Modular design, reducing O&M costs, easy to expand
- Outdoor design, IP54 rated for application in different environments
- New and old battery racks can be integrated
- Comprehensive fire prevention design to ensure system safety
- Smart cooling control to improve battery performance and lifecycle
- Rack-level control and management for ESS, improved availability and efficiency

Model Name (PCS Skid, Battery Container)	PCS Skid: CPS PSW2.4M-EU Battery Container: CPS ES-5015KWH-EU		PCS Skid: CPS PSW2M-EU Battery Container: CPS ES-4179KWH-EU	
Battery Parameter				
Battery Capacity	5MWh	2x5MWh	4.179MWh	2x4.179MWh
Battery Cell	LFP 314Ah			
Pack Configuration	1P52S			
Battery Configuration	1x12P416S	2x12P416S	1x10P416S	2x10P416S
Rate Voltage	1331.2V			
Operating Voltage Range	1164~1497V			
Electrical Parameter				
Rated AC Output Power	2.4MW		2MW	
Medium Voltage Rating	13.8kV, 15kV, 20kV, 30kV, 33kV, 34.5kV			
Grid Frequency	50Hz / 60Hz			
Vector Group	Dy1, Dy11			
Cooling Method	ONAN			
System Parameter				
Protection Degree	PCS Skid: IP54 ; Battery Container: IP54			
Cooling Method	PCS: Air Cooling, Batteries :Liquid Cooling			
Operating Temperature Range	-20°C to 50°C			
Operating Altitude	≤6562ft / 2000m			
Operating Humidity	0-95%, non-condensing			
PCS Weight	12.9T	12.9T	12T	12.5T
Battery Container Weight	43T	2x43T	37T	2x37T
Dimensions (WxHxD)	PCS Skid: 238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm Battery Container: 238.5 x 114.0 x 96.0in / 6058 x 2896 x 2438mm			
Display and Communication				
Communication	RS485 / Ethernet / CAN			
Communication protocol	Modbus-TCP/RTU			
Safety				
Certifications and Standards	Battery : IEC 62477 / IEC 61000 / IEC 62619 / IEC 63056 PCS: UL1741, CSA-22.2 NO.107.1-16, IEEE1547-2018, FCC Part 15, IEC61000, IEC62477, IEC62109, EN50549, VDE 4110&4120, NTS2.1			

* Product specifications and dimensions may be updated based on the latest information provided and are subject to change without prior notice.

Generating Superior Solutions for Energy and More.

KSTAR
Powering the Future

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		

202405-V2

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) [1]	
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.

KSTAR

BluE Residential ESS

All In One Energy Storage System
CATL Battery Solutions

Safety

CATL LFP Battery， stable and safe
Module, pack, system, triple protection
IP65, outdoor installation, away from living room

Simple

Modular design, single person can carry and install it.Plug and play, 30 min quick installation
Space saving; 0.15 sq. m foot print

Intercon -nection

Global cloud platform & Mobile APP anytime and any where
Open API, support power internet applications

Battery Model	BluE-PACK5.1
Physical	
Battery type	LFP (LiFePO4)
Weight	54KG
Dimension (W x H x D)	540*490*240mm
IP Protection	IP65
Warranty	5 Year Product Warranty, 10 Year Performance Warranty
Electrical	
Energy Capacity	5.12kwh
Usable Capacity	4.6kwh
Depth of Discharge (DoD)	90%
Nominal Voltage	51.2V
DC Circuit Breaker	125A
Operating Voltage Range	44.8-56.5V
Internal Resistance	<20mΩ
Cycle Life	10000cycle

Operation	
Max. Charge/Discharge Current	50A/80A
Rated DC power	4096W
Max. Charge/Discharge Power	2825W/4096W
Operating Temperature Range	-10 to 50℃ charging -10 to 50℃ discharging
Humidity	0~95% (No condensation)
BMS	
Modules Connection	Max. 4
Capacity	100-400Ah
Power Consumption	<2W
Communication	CAN & RS485
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Certificate	
Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973

*Maximum 4 battery pack in parallel.

202312-V3

Hybrid Inverter Model	BluE-S 3680D-M1	BluE-S 5000D-M1	BluE-S 6000D-M1
PV String Input			
Max. DC Voltage	580V	580V	580V
Nominal Voltage	400V	400V	400V
MPPT Voltage Range	80V-560V	80V-560V	80V-560V
Start Voltage	150V	150V	150V
Number of MPPT Tracker	2	2	2
Strings Per MPPT Tracker	1	1	1
Max. Input Current Per MPPT	15A	15A	15A
Max. Short-circuit Current Per MPPT	18A	18A	18A
AC Output (Grid)			
Nominal AC Output Power	3680W	5000W	6000W
Max. AC Apparent Power	7360VA (from grid)	7360VA (from grid)	7360VA (from grid)
Max. AC Output Power	3680W	5000W[1]	6000W
Nominal AC Voltage	230Vac	230Vac	230Vac
AC Grid Frequency Range	50 / 60Hz±5Hz	50 / 60Hz±5Hz	50 / 60Hz±5Hz
Max. Output Current	16A	22A[2]	25A
Max. Input Current	32A	32A	32A
Power Factor (cosΦ)	0.8leading-0.8lagging	0.8leading-0.8lagging	0.8leading-0.8lagging
THDi	<3%	<3%	<3%
Battery Input			
Battery Type	LFP (LiFePO4)	LFP (LiFePO4)	LFP (LiFePO4)
Nominal Battery Voltage	48V	48V	48V
Charging Voltage Range	40-60V	40-60V	40-60V
Max. Charging Current	50A	100A	100A
Max. Discharging Current	80A	100A	100A
Battery Capacity	100-400Ah	100-400Ah	100-400Ah
Charging Strategy for Li-ion Battery	Depend on the BMS	Depend on the BMS	Depend on the BMS
AC Output (Backup)			
Max. Output Apparent Power	4000VA	5000VA	5000VA
Peak Output Apparent Power	6900VA 10sec	6900VA 10sec	6900VA 10sec
Max. Output Current	16A	20A	20A
Nominal Output Voltage	230V	230V	230V
Nominal Output Frequency	50/60Hz	50/60Hz	50/60Hz
Output THDv (@Linear Load)	<3% (Linear Load)	<3% (Linear Load)	<3% (Linear Load)
Efficiency			
Max. PV Efficiency	97.6%	97.6%	97.6%
Euro. PV Efficiency	97.0%	97.0%	97.0%
Protection			
DC Switch	Bipolar DC Switch (125A/Pole)	Bipolar DC Switch (125A/Pole)	Bipolar DC Switch (125A/Pole)
Anti-islanding Protection	Yes	Yes	Yes
Output Over Current	Yes	Yes	Yes
DC Reverse Polarity Protection	Yes	Yes	Yes
String Fault Detection	Yes	Yes	Yes
AC/DC Surge Protection	DC Type II;AC Type III	DC Type II;AC Type III	DC Type II;AC Type III
Insulation Detection	Yes	Yes	Yes
AC Short Circuit Protection	Yes	Yes	Yes
General Specifications			
Dimensions W x H x D	540*590*240mm		
Weight	32kg		
Operating Temperature Range	-25℃~+60℃		
Noise (dB)	<25		
Cooling Type	Natural Convection		
Max. Operation Altitude	2000m		
Operation Humidity	0~95% (No Condensation)		
IP Class	IP65		
Topology	Battery Isolation		
Communication	RS485/CAN2.0/WIFI/4G		
Display	LCD/APP		
Certification & Standard	IEC/EN 62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21;G98;G99;C10/C11		

*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.
*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.

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BluePulse Series NEW
C&I Energy storage system solution

Safe & Reliable

Economical & Efficient

Simple & User-friendly

subsystem	KAC50DP	BC100DE	BC197DE
50KW/100KWH	1	1	
50KW/200KWH	1	2	
50KW/197KWH	1		1
100KW/197KWH	2		1

* The maximum parallel number of PCS is 20.

Outdoor Battery Cabinet Parameters

Technical Parameters	BC100DE	BC197DE
Battery Type	LFP	
Manufacturer	CATL	
Cell Type	100ah	280ah
Battery Module Capacity	5.12 kWh	17.92 kWh
Number of Modules	20	11
Total Battery Capacity	102. 4 kWh	197 kWh
Nominal Voltage	512 V	704 V
Operating Voltage Range	456 V ~ 576 V	616 V ~ 792 V
Charge / Discharge Rate	0.5C	
DoD	90%	
General Parameters		
Dimensions (W x H x D)	1100 x 2380 x 1100 mm	1300 x 2380 x 1200 mm
Weight	< 1.5 T	< 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	

202407-V1

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
THDv	< 3% (100% Load)
Adjustable PF Range	-1 (Lagging) ~ 1 (Leading)
AC Side (Off Grid) [1]	
Nominal AC Voltage	230 / 400 V ±3%; 3L+N+PE
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 (WxHxD)	650 x 715 x 325 mm
Weight	75 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	IEC 62477; IEC 61000; CE;GB/T; IEC 62109; IEC 61683; IEC 60068; IEC 61727; IEC 62116; EN 50549; VDE 4105; G 99

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

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All In One Energy Storage System
CATL Battery Solutions

Safety — CATL LFP Battery, Stable and safe
Module, pack, system, triple protection

Adaptable — Adjustable power in each phase
Support diesel generator control(DI/DO)

Simple — Modular design, Plug and play
Mobile APP Monitoring

Efficient — Supporting 200% oversized PV power
On&OFF Grid parallel system

Battery Model	BluE-PACK5.1
Physical	
Battery type	LFP (LiFePO4)
Weight	54KG
Dimension (W x H x D)	540*490*240mm
IP Protection	IP65
Warranty	5 Year Product Warranty, 10 Year Performance Warranty
Electrical	
Energy Capacity	5.12kwh
Usable Capacity	4.6kwh
Depth of Discharge (DoD)	90%
Nominal Voltage	51.2V
DC Circuit Breaker	125A
Operating Voltage Range	44.8-56.5V
Internal Resistance	<20mΩ
Cycle Life	10000cycle

Operation	
Max. Charge/Discharge Current	50A/80A
Rated DC power	4096W
Max. Charge/Discharge Power	2825W/4096W
Operating Temperature Range	-10 to 50℃ charging -10 to 50℃ discharging
Humidity	0~95% (No condensation)
BMS	
Modules Connection	Max.8
Capacity	200/400/600/800Ah
Power Consumption	<2W
Communication	CAN & RS485
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Certificate	
Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973

202311-V2

Hybrid Inverter Model	E8KT	E10KT	E12KT
PV String Input			
Max. Continuous PV Input Power	16kW	20kW	20kW
Max. DC Voltage		1100V	
Nominal Voltage		720V	
MPPT Voltage Range		140V-1000V	
MPPT Voltage Range (Full Load)	380V-850V	420V-850V	480V-850V
Start Voltage[1]		200V	
Number of MPPT		2	
Strings Per MPPT		1	
Max. Input Current Per MPPT		15A	
Max. Short-circuit Current Per MPPT		20A	
AC Output (Grid)			
Nominal AC Output Power	8kW	10kW	12kW
Max. AC Apparent Power	8.8kVA	11kVA[2]	13.2kVA
Nominal AC Voltage		400Vac	
AC Grid Frequency Range		50 / 60Hz±5Hz	
Nominal Output Current	11.6A	14.5A	17.4A
Max. Output Current	12.8A	16A	19.2A
Power Factor (cosΦ)		0.8leading-0.8lagging	
THDi		< 3%	
Battery Input			
Battery Type		LFP (LiFePO4)	
Nominal Battery Voltage	51.2V	51.2V	51.2V
Charging Voltage Range		44-58V	
Max. Charging Current	160A	160A	160A
Max. Discharging Current	160A	200A	200A
Battery Capacity		200/400/600/800Ah	
AC Output (Backup)			
Nominal AC Output Power	7.36kW	9.2kW	9.2kW
Max. AC Output Power	8kVA	10kVA	10kVA
Nominal Output Current	10.7A	13.3A	13.3A
Max. Output Current	11.6A	14.5A	14.5A
Nominal Output Voltage		400V	
Nominal Output Frequency		50/60Hz	
Output THDv (@Linear Load)		<2% (Linear Load)	
Efficiency			
Max. PV Efficiency		97.60%	
Euro. PV Efficiency		97.00%	
Protection			
Anti-islanding Protection		Yes	
Output Over Current Protection		Yes	
DC Reverse Polarity Protection		Yes	
String Fault Detection		Yes	
AC/DC Surge Protection		DC Type II;AC Type III	
Insulation Detection		Yes	
AC Short Circuit Protection		Yes	
General Specifications			
Dimensions W x H x D		540*980*240mm	
Weight		49kg	
Operating Temperature Range		-25℃~+60℃	
Cooling Type		Natural Convection	
Max. Operation Altitude		2000m	
Operation Humidity		0~95% (No Condensation)	
IP Class		IP65	
Topology		Battery Isolation	
Communication		RS485/CAN2.0/WIFI/4G	
Display		LCD/APP	

* 1. Minimum voltage for inverter to start power output.
2. Max apparent power for the Belgian market is 10KVA.

KSTAR
Stock code: 002518

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国轩高科
GOTION HIGH-TECH

电芯产品手册
CELL PRODUCT MANUAL

Solar energy industry solutions

PERSOL

LFP类电芯产品应用
LFP battery product application

乘用车电池系统
PV battery system

乘用车电池系统
PV battery system

专用车电池系统
Special vehicle battery system

商用车电池系统
CV battery system

商用车电池系统
CV battery system

LFP电芯产品性能优势
LFP cell performance advantage

高能量密度 High Energy Density
高能量密度，量产单体电芯能量密度可达210Wh/kg，处行业领先水平；
High energy density, mass production cell energy density is over 210Wh/kg, at the leading level in the industry;

超长寿命 Long Life
超长寿命，≥3000次循环寿命，系统寿命可达8年以上，100万公里；
Ultra-long life cycle, ≥ 3000 cycle life, system life can reach more than 8 years, 1 million kilometers mileage;

超高安全性 Ultra High Security
高安全性，全系列通过国际性安全性能要求，结构设计更合理，性能更稳定；
High safety, the whole series pass international safety performance requirements, better structural design, better stable performance;

智能温控技术 Intelligent Temperature Control Technology
工作温度范围广，可满足-30~60°C温度区间下的正常工作，温度适应区域广。
Wide operating temperature range, can meet the normal operation under -30~60 °C temperature range, temperature adaptation area is wide.

能量型LFP类电芯产品
High Energy Density LFP Cell

参数/LFP电芯产品 Parameter/LFP Cell	IFR32135-15Ah	IFP2265146-21Ah
		
尺寸 Deminsion	33.6±0.4mm（直径/D） 139.7±0.5mm（高度/H）	22.5±0.5mm（T） 65±0.2mm（W） 146±0.3mm（H）
重量 Weight	268±5g	430±5g
标称容量/电压 Nominal Capacity/Voltage	15Ah/3.2V	21Ah/3.2V
25℃循环寿命 25℃ Cycle life	≥2000圈/cycle	≥2500圈/cycle
45℃循环寿命 45℃ Cycle life	≥1000圈/cycle	≥1000圈/cycle
安全性能 Safety performance	通过GB38031-2020标准认证 Pass GB38031-2020	通过GB38031-2020标准认证 Pass GB38031-2020
快充能力 SFC capability	支持62min快充（10~80%SOC） 62min@10~80%SOC	支持48min快充（0~80%SOC） 48min@0~80%SOC
存储/充电温度 Storage /charge temperature	-35~60℃/-10~55℃	-30~60℃/0~55℃
低温容量保持率 Capacity rentention at low temperature	-20℃，≥70%	-20℃，≥80%
使用寿命 Service Life	8~10年/8~10 Year	8~10年/8~10 Year
倍率性能 C-rate performance	持续充/放电倍率0.68C/1C Continuous Charge/Discharge 0.8C/1C 脉冲充/放电倍率2.25C/3C Pulse Charge/Discharge 2.25C/3C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率3.75C/5C Pulse Charge/Discharge 2.25C/3C

能量型LFP类电芯产品
High Energy Density LFP Cell

参数/LFP电芯产品 Parameter/LFP Cell	IFP20100140-27Ah	IFP20100140-30Ah
		
尺寸 Deminsion	21.3±0.9mm (T)　100.75±0.5mm (W) 144.88±0.5mm (H)	21.2±0.5mm (T)　100.3±0.5mm (W) 144.56±0.5mm (H)
重量 Weight	605±18g	615±18g
标称容量/电压 Nominal Capacity/Voltage	27Ah/3.2V	30Ah/3.2V
25°C循环寿命 25°C Cycle life	≥2500圈/cycle	≥2000圈/cycle
45°C循环寿命 45°C Cycle life	≥1400圈/cycle	≥1200圈/cycle
安全性能 Safety performance	满足31485-2015标准IEC62619 IEC62133 JISC8715-2 UL1642 UL1973 UN38.3 UL9540A	通过GB38031-2020标准认证 GB31485 UL1642 JISC8715-2 UN38.3 IEC62619
快充能力 SFC capability	支持54min (0~90%SOC) 54min@0~80%SOC	支持48min快充 (0~80%SOC) 48min@0~80%SOC
存储/充电温度 Storage /charge temperature	-30~60°C/0~60°C	-30~60°C/0~55°C
低温容量保持率 Capacity rentention at low temperature	-20°C，≥80%	-20°C，≥80%
使用寿命 Service Life	10~12年/10~12 Year	10年/12 Year
倍率性能 C-rate performance	持续充/放电倍率1C/6C Continuous Charge/Discharge 1C/6C 脉冲充/放电倍率3C/8C Pulse Charge/Discharge 3C/8C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率3C/5C Pulse Charge/Discharge 3C/5C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP28148115-52Ah	IFP42100140-67Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	28.2±0.5mm(T) 148±0.5mm(W) 118.6±0.5mm(H)	43.2±0.5mm(T) 100.24±0.2mm(W) 144.9±0.5mm(H)
重量 Weight	966±30g	1241±37g
标称容量/电压 Nominal Capacity/Voltage	52Ah/3.2V	67Ah/3.2V
25℃循环寿命 25°C Cycle life	≥2500圈/cycle	≥2500圈/cycle
45℃循环寿命 45°C Cycle life	≥1300圈/cycle	≥1500圈/cycle
安全性能 Safety performance	通过GB38031-2020标准认证 Pass GB38031-2020	通过GB38031-2020标准认证 Pass GB38031-2020
快充能力 SFC capability	支持45min快充(0~80%SOC) 45min@0~80%SOC	支持48min快充(0~80%SOC) 48min@0~80%SOC
存储/充电温度 Storage /charge temperature	-30~60°C/0~55°C	-30~60°C/0~55°C
低温容量保持率 Capacity rentention at low temperature	-20°C, ≥85%	-20°C, ≥80%
使用寿命 Service Life	8~10年/8~10 Year	10年/10 Year
倍率性能 C-rate performance	持续充/放电倍率1C/2C Continuous Charge/Discharge 1C/2C 脉冲充/放电倍率3.75C/5C Pulse Charge/Discharge 3.75C/5C	持续充/放电倍率1C/1.2C Continuous Charge/Discharge 1C/1.2C 脉冲充/放电倍率3.75C/5C Pulse Charge/Discharge 3.75C/5C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP52148102-87Ah	IFP27175200A-100Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	52±0.5mm(T) 148±0.5mm(W) 102±0.5mm(H)	27.2±0.5mm(T) 175.4±0.5mm(W) 206.1±0.5mm(H)
重量 Weight	1625±50g	2022±5g
标称容量/电压 Nominal Capacity/Voltage	87Ah/3.2V	100Ah/3.2V
25°C循环寿命 25°C Cycle life	3000圈/cycle	6000圈/cycle
45°C循环寿命 45°C Cycle life	1500圈/cycle	2500圈/cycle
安全性能 Safety performance	通过GB38031-2020标准认证 Pass GB38031-2020	通过GB/T31484,485,486标准认证 IEC62619 GBT36276 UL1973 UN38.3
快充能力 SFC capability	37min,0～80%SOC	48min,0～80%SOC
存储/充电温度 Storage /charge temperature	0～55°C/-20～60°C	0～55°C/-30～60°C
低温容量保持率 Capacity rentention at low temperature	-20°C,≥80%	-20°C,≥80%
使用寿命 Service Life	10年/10 Year	15年/15 Year
倍率性能 C-rate performance	持续充/放电倍率1.3C/1.5C Continuous Charge/Discharge 1.3C/1.5C 脉冲充/放电倍率2C/5C Pulse Charge/Discharge2C/5C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP50160116-102Ah	IFP53148115-104Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	49.9±0.5mm(T) 160±0.8mm(W) 118.5±0.5mm(H)	52.3±0.5mm(T) 148.6±0.5mm(W) 118.9±0.3mm(H)
重量 Weight	1926±30g	1909±50g
标称容量/电压 Nominal Capacity/Voltage	102Ah/3.2V	104Ah/3.2V
25℃循环寿命 25℃ Cycle life	≥6000圈/cycle	3000圈/cycle
45℃循环寿命 45℃ Cycle life	≥1500圈/cycle	1500圈/cycle
安全性能 Safety performance	满足IEC62169 UL1642 UL1973 UN38.3 UL9540A SatisfyIEC62169 UL1642 UL1973 UN38.3 UL9540A	满足GB38031-2020 Satisfy GB38031-2020
快充能力 SFC capability	支持48min快充(0~80%SOC) 48min,0～80%SOC	支持40min快充(0~80%SOC) 40min,0～80%SOC
存储/充电温度 Storage /charge temperature	-30~60℃/0~60℃	-30~60℃/-20~55℃
低温容量保持率 Capacity rentention at low temperature	≥70%(-10°,0.1C)	-20℃,≥85%
使用寿命 Service Life	10~12年/10 ~12Year	10年/10 Year
倍率性能 C-rate performance	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率3C/5C Pulse Charge/Discharge3C/5C	持续充/放电倍率1.3C/1.5C Continuous Charge/Discharge 1.3C/1.5C 脉冲充/放电倍率3.75C/5C Pulse Charge/Discharge3.75C/5C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP27175200-105Ah	IFP29207168A-119Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	27.2±0.5mm(T) 175±0.3mm(W) 200±0.3mm(H)	29.5±0.3mm(T) 206.8±0.3mm(W) 172.7±0.5mm(H)
重量 Weight	2060±50g	2239±60g
标称容量/电压 Nominal Capacity/Voltage	105Ah/3.2V	119Ah/3.2V
25℃循环寿命 25℃ Cycle life	≥3000圈/cycle	4000圈/cycle
45℃循环寿命 45℃ Cycle life	≥1200圈/cycle	2000圈/cycle
安全性能 Safety performance	通过GB38031-2020标准认证 Pass GB38031-2020	通过GB38031-2020标准认证 Pass GB38031-2020
快充能力 SFC capability	支持48min快充(0~80%SOC) 48min@0~80%SOC	48min,0～80%SOC
存储/充电温度 Storage /charge temperature	-30~60℃/0~55℃	0～55℃/-30～60℃
低温容量保持率 Capacity rentention at low temperature	-20℃,≥80%	0℃,≥80%
使用寿命 Service Life	10~12年/10~12 Year	10年/10Year
倍率性能 C-rate performance	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率3.75C/5C Pulse Charge/Discharge3.75C/5C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP29207168-124Ah	IFP54173145-150Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	29.5±0.3mm(T) 206.8±0.3mm(W) 172.7±0.5mm(H)	54.2±0.7mm(T) 174±0.5mm(W) 145.5±0.5mm(H)
重量 Weight	2280±60g	2816±50g
标称容量/电压 Nominal Capacity/Voltage	124Ah/3.2V	150Ah/3.2V
常温循环@25℃,80%EOL 25℃ Cycle life	≥4000圈/cycle	≥3000圈/cycle
高温循环@45℃,80%SOC 45℃ Cycle life	≥2000圈/cycle	≥1500圈/cycle
安全性能 Safety performance	满足GB38031 IEC62660 UL2580 IEC60068-2-38 SAEJ2929	通过GB38031-2020 Pass GB38031-2020
快充能力 SFC capability temperature	支持48min快充(0~80%SOC) 48min@0~80%SOC	支持48min快充(0~80%SOC) 48min@0~80%SOC
存储/充电温度 Storage /charge temperature	-30~60℃/0~55℃	-30~60℃/0~55℃
低温容量保持率 Capacity rentention at low	≥85%(0℃)	-20℃,≥80%
使用寿命 Service Life	10年/10Year	10年/10Year
倍率性能 C-rate performance	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率2.25C/3C Pulse Charge/Discharge2.25C/3C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP54173205-230Ah
参数/LFP电芯产品 Parameter/LFP Cell	
尺寸 Deminsion	54.2±0.7mm(T) 175±0.5mm(W) 205.03±0.5mm(H)
重量 Weight	4150±50g
标称容量/电压 Nominal Capacity/Voltage	230Ah/3.2V
25℃循环寿命 25℃ Cycle life	3000圈/cycle
45℃循环寿命 45℃ Cycle life	1500圈/cycle
安全性能 Safety performance	通过GB38031-2020标准认证 Pass GB38031-2020
快充能力 SFC capability	48min,0～80%SOC
存储/充电温度 Storage /charge temperature	0～55℃/-30～60℃
低温容量保持率 Capacity rentention at low temperature	-20℃,≥80%
使用寿命 Service Life	10年/10Year
倍率性能 C-rate performance	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C

高安全性
Safety

宽温度范围
Wide temperature range

长循环和老化寿命
Long cycle and aging life

绿色环保
Environmental protection

高能量密度
High-power

快充
Quick Charge

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP81175200-300Ah	IFP81175200-340Ah
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	81.2±0.5mm(T) 175.4±0.5mm(W) 202.6±0.5mm(H)	81.2±0.5mm(T) 175.4±0.3mm(W) 200.3±0.5mm(H)
重量 Weight	5998±300g	6068±100g
标称容量/电压 Nominal Capacity/Voltage	300Ah/3.2V	340Ah/3.2V
25°C循环寿命 25°C Cycle life	≥8000圈/cycle	≥4000圈/cycle
45°C循环寿命 45°C Cycle life	≥2000圈/cycle	≥2000圈/cycle
安全性能 Safety performance	通过GB/T36276-2018 UL1973 IEC62619 UL9540A UN38.3 Pass GB/T36276-2018 UL1973 IEC62619 UL9540A UN38.3	通过GB38031-2020 Pass GB38031-2020
快充能力 SFC capability	不支持 Nonsupport	支持48min快充(0~80%SOC) 48min@0~80%SOC
存储/充电温度 Storage /charge temperature	-30~60°C/0~55°C	-30~60°C/0~55°C
低温容量保持率 Capacity rentention at low temperature	-20°C, ≥80%	-20°C, ≥80%
使用寿命 Service Life	15年/15Year	10年/10Year
倍率性能 C-rate performance	持续充/放电倍率0.7C/0.7C Continuous Charge/Discharge 0.7C/0.7C 脉冲充/放电倍率2C/3C Pulse Charge/Discharge2C/3C	持续充/放电倍率1C/1C Continuous Charge/Discharge 1C/1C 脉冲充/放电倍率2.25C/3C Pulse Charge/Discharge2.25C/3C

能量型LFP类电芯产品
High Energy Density LFP Cell

	IFP50300109-210Ah (L300)	IFP22590120-202Ah (L600)
参数/LFP电芯产品 Parameter/LFP Cell		
尺寸 Deminsion	50.7mm(T) 300mm(W) 109mm(H)	22mm(T) 590mm(W) 120mm(H)
重量 Weight	3730 g	3520±60g
标称容量/电压 Nominal Capacity/Voltage	210 Ah/3.2 V	202 Ah/3.2 V
25°C循环寿命 25°C Cycle life	≥3000/cycle	≥3000/cycle
45°C循环寿命 45°C Cycle life	≥1600/cycle	≥1500/cycle
25°C快充性能 Safety performance	25min(10%~80%)	25min(10%~80%)
安全性能 SFC capability	国标 National standard	国标 National standard
55°C Storage,存储100%SOC@70%SOH	≥2年/2Year	≥2年/2Year
存储/充电温度 Storage /charge temperature	-30 ~ 60 °C / 0 ~ 55 °C	-30 ~ 65 °C / 0 ~ 60 °C
低温容量保持率 Capacity rentention at low temperature	85%容量/80%能量 85% capacity /80% energy	>80%
使用寿命 Service Life	8年/8Year	8年/8Year
倍率性能 C-rate performance	持续充/放电倍率1.7C/2C Continuous Charge/Discharge 1.7C/2C 脉冲充/放电倍率2.25C/3C Pulse Charge/Discharge2.25C/3C	持续充/放电倍率1.68C/2C Continuous Charge/Discharge 1.68C/2C 脉冲充/放电倍率3C/5C Pulse Charge/Discharge3C/5C

大众UC LFP
VW UV LFP

	IFP25256106-92Ah
参数/LFP电芯产品 Parameter/LFP Cell	
尺寸 Deminsion	24.8mm (T) 256mm (W) 106mm (H)
重量 Weight	1542±15g
标称容量/电压 Nominal Capacity/Voltage	91.5Ah/ 3.2V
25℃, 0.33C/0.5C,SOH 90%循环寿命 25℃, 0.33C/0.5C,SOH 90% cycle life	>1200圈/cycle
@25℃,QC/0.5C,SOH 90%循环寿命 @25℃,QC/0.5C,SOH 90% cycle life	>1200圈/cycle
安全性能 Safety performance	通过PV8450标准认证 Pass V8450标准认证
快充能力 SFC capability	25min (8%~80% SOC)
存储/充电温度 Storage /charge temperature	-30~60℃/0~60℃
低温容量保持率 Capacity rentention at low temperature	0℃/RT @0.33C, ≥87%
使用寿命 Service Life	8年15万公里 150000 kilometers in 8 years
倍率性能 C-rate performance	持续充/放电倍率2.5C/3C Continuous Charge/Discharge 2.5C/3C 脉冲充/放电倍率3C/4.5C Pulse Charge/Discharge3C/4.5C

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能量型NCM类电芯产品
High Energy Density NCM Cell

	INP27148101-55Ah	INP40148109A-95Ah
参数/NCM电芯产品 Parameter/NCM Cell		
尺寸 Deminsion	27.5±0.5mm(T) 148±0.5mm(W) 101±0.5mm(H)	40.2±0.5mm(T) 148.4±0.5mm(W) 109±0.5mm(H)
重量 Weight	890±10g	1460g±40g
标称容量/电压 Nominal Capacity/Voltage	55Ah/3.65V	95Ah/3.73V
25℃循环寿命 25℃ Cycle life	≥2000圈/cycle	≥2000圈/cycle
45℃循环寿命 45℃ Cycle life	≥1000圈/cycle	≥1000圈/cycle
安全性能 SFC capability	通过GB38031-2020标准认证 Pass GB38031-2020	通过GB38031-2020，整包单串无热扩展 Pass GB38031-2020,No thermal propagation
快充能力 SFC capabillity	支持30min快充(10~80%SOC) 30min@10~80%SOC	≤30min(10-80%SOC)
存储/充电温度 Storage /charge temperature	-30~60℃/-20~55℃	-30~60℃/-20~55℃
低温容量保持率 Capacity rentention at low temperature	-20℃，≥80%	-20℃，≥80%
使用寿命 Service Life	8~10年	8~10年
倍率性能 C-rate performance	持续充/放电倍率2C/3C Continuous Charge/Discharge 2C/3C 脉冲充/放电倍率5C/8C Pulse Charge/Discharge5C/8C	持续充/放电倍率2C/3C Continuous Charge/Discharge 2C/3C 脉冲充/放电倍率4C/8C Pulse Charge/Discharge4C/8C

大众UC NCM
VW UC NCM

	INP25256106-116Ah
参数/NCM电芯产品 Parameter/NCM Cell	
尺寸 Deminsion	24.8mm (T) 256mm (W) 106mm (H)
重量 Weight	1612±15g
标称容量/电压 Nominal Capacity/Voltage	115.8Ah / 3.69V
25°C循环寿命 25°C Cycle life	≥2000圈/cycle
45°C循环寿命 45°C Cycle life	≥800圈/cycle
安全性能 SFC capability	通过PV8450/UN38.3标准认证 Psaa PV8450/UN38.3
快充能力 SFC capabillity	25min(8~80%SOC)
存储/充电温度 Storage /charge temperature	-40~70°C/-30~60°C
低温容量保持率 Capacity rentention at low temperature	-10℃，≥85%
使用寿命 Service Life	8年16万公里 160,000 kilometers in 8 years
倍率性能 C-rate performance	持续充/放电倍率2C/3C Continuous Charge/Discharge 2C/3C

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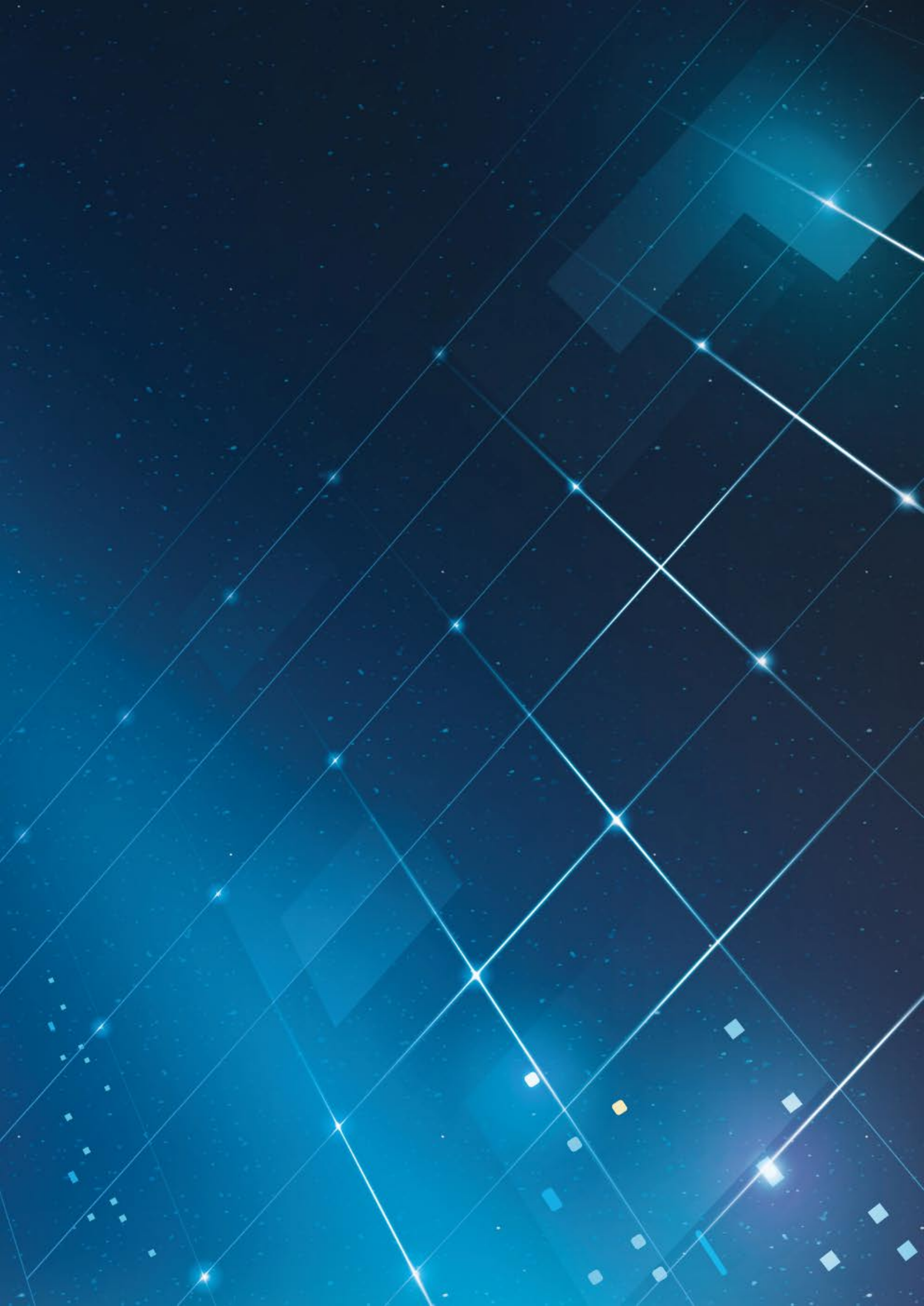
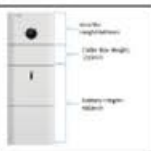
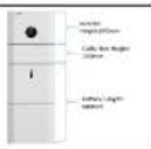
Equipments



KSTAR

No.	KSTAR MODEL	PICTURES	DESCRIPTION
1	Blue-G 1000S		String Grid Tied PV Inverter 1KW 1/N/PE AC230V 50/60HZ 1MPPT
2	Blue-G 2000S		String Grid Tied PV Inverter 2KW 1/N/PE AC230V 50/60HZ 1MPPT
3	Blue-G 3000S		String Grid Tied PV Inverter 3KW 1/N/PE AC230V 50/60HZ 1MPPT
4	Blue-G-3000D		String Grid Tied PV Inverter 3KW 1/N/PE AC230V 50/60HZ 2MPPT
5	Blue-G-4000D		String Grid Tied PV Inverter 4KW 1/N/PE AC230V 50/60HZ 2MPPT
6	Blue-G-5000D		String Grid Tied PV Inverter 5KW 1/N/PE AC230V 50/60HZ 2MPPT
7	Blue-G-6000D		String Grid Tied PV Inverter 6KW 1/N/PE AC230V 50/60HZ 2MPPT
8	Blue-3KT		String Grid Tied PV Inverter 3KW 3/N/PE AC400V 50/60HZ 2MPPT
9	Blue-3.6KT		String Grid Tied PV Inverter 3.6KW 3/N/PE AC400V 50/60HZ 2MPPT
10	Blue-4KT		String Grid Tied PV Inverter 4KW 3/N/PE AC400V 50/60HZ 2MPPT
11	Blue-5KT		String Grid Tied PV Inverter 5KW 3/N/PE AC400V 50/60HZ 2MPPT
12	Blue-6KT		String Grid Tied PV Inverter 6KW 3/N/PE AC400V 50/60HZ 2MPPT
13	Blue-8KT		String Grid Tied PV Inverter 8KW 3/N/PE AC400V 50/60HZ 2MPPT
14	Blue-10KT		String Grid Tied PV Inverter 10KW 3/N/PE AC400V 50/60HZ 2MPPT
15	Blue-12KT		String Grid Tied PV Inverter 12KW 3/N/PE AC400V 50/60HZ 2MPPT
16	Blue-15KT		String Grid Tied PV Inverter 15KW 3/N/PE AC400V 50/60HZ 2MPPT
17	Blue-20KT		String Grid Tied PV Inverter 20KW 3/N/PE AC400V 50/60HZ 2MPPT
18	Blue-25KT		String Grid Tied PV Inverter 25KW 3/N/PE AC400V 50/60HZ 2MPPT
19	KSG-30KT		String Grid Tied PV Inverter 30KW 3/N/PE AC400V 50/60HZ 3MPPT
20	KSG-40KT		String Grid Tied PV Inverter 40KW 3/N/PE AC400V 50/60HZ 3MPPT
21	G50KT		String Grid Tied PV Inverter 50KW 3/N/PE AC400V 50/60HZ 4MPPT
22	G60KT		String Grid Tied PV Inverter 60KW 3/N/PE AC400V 50/60HZ 4MPPT
23	G70KT		String Grid Tied PV Inverter 70KW 3/N/PE AC400V 50/60HZ 4MPPT
24	G80KT		String Grid Tied PV Inverter 80KW 3/N/PE AC400V 50/60HZ 4MPPT
25	KSG-120CL		String Grid Tied PV Inverter 120KW 3/N/PE DC1100V/AC400V 50/60HZ 10MPPT
26	KSG-250UH		String Grid Tied PV Inverter 225KW 3/N/PE DC1500V/AC800V 50/60HZ 12MPPT
Options			
27	WIFI PLUG		KSTAR WIFI PLUG FOR Single Unit Inverter
28	SDM630MCT		Smart Meter For 10-120K New Generation Inverter Models/Single PC.

KSTAR

No.	KSTAR MODEL	PICTURES	DESCRIPTION
1	Blue H3-5		ALL IN ONE Solution: Inverter Blue-S-3680 +Blue-Pack-5.1 Battery Pack
2	Blue H5-5		ALL IN ONE Solution: Inverter Blue-S-5000 +Blue-Pack-5.1 Battery Pack
3	Blue H3-10		ALL IN ONE Solution: Inverter Blue-S-3680 +Blue-Pack-10.2 Battery Pack+Wifi Plug Battery Pack Connection Cables,match BluE-Pack 10.2kwh/two pcs of battery packs
4	Blue H5-10		ALL IN ONE Solution: Inverter Blue-S-5000 +Blue-Pack-10.2 Battery Pack+Wifi Plug Battery Pack Connection Cables,match BluE-Pack 10.2kwh/two pcs of battery packs
5	Blue H3-15		ALL IN ONE Solution: Inverter Blue-S-3680 +Blue-Pack-15.3 Battery Pack+Wifi Plug Battery Pack Connection Cables+(decorative cover with KSTAR LOGO) match BluE-Pack 15.3kwh/ three pcs of battery packs
6	Blue H5-15		ALL IN ONE Solution: Inverter Blue-S-5000 +Blue-Pack-15.3 Battery Pack+Wifi Plug Battery Pack Connection Cables+(decorative cover with KSTAR LOGO) match BluE-Pack 15.3kwh/ three pcs of battery packs
7	Blue H3-20		ALL IN ONE Solution: Inverter Blue-S-3680 +Blue-Pack-20.4 Battery Pack+Wifi Plug Battery Pack Connection Cables+(decorative cover with KSTAR LOGO) match BluE-Pack 20.4kwh /four pcs of battery packs
8	Blue H5-20		ALL IN ONE Solution: Inverter Blue-S-5000 +Blue-Pack-20.4 Battery Pack+Wifi Plug Battery Pack Connection Cables+(decorative cover with KSTAR LOGO) match BluE-Pack 20.4kwh /four pcs of battery packs
9	E10KT		ALL IN ONE Solution: Inverter E10KT+Blue-Pack-10.2 Battery Pack+Wifi Plug Battery Pack Connection Cables,match BluE-Pack 10.2kwh/two pcs of battery packs
10	E10KT		ALL IN ONE Solution: Inverter E10KT +Blue-Pack-20.4 Battery Pack+Wifi Plug Battery Pack Connection Cables+(decorative cover with KSTAR LOGO) match BluE-Pack 20.4kwh /four pcs of battery packs

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