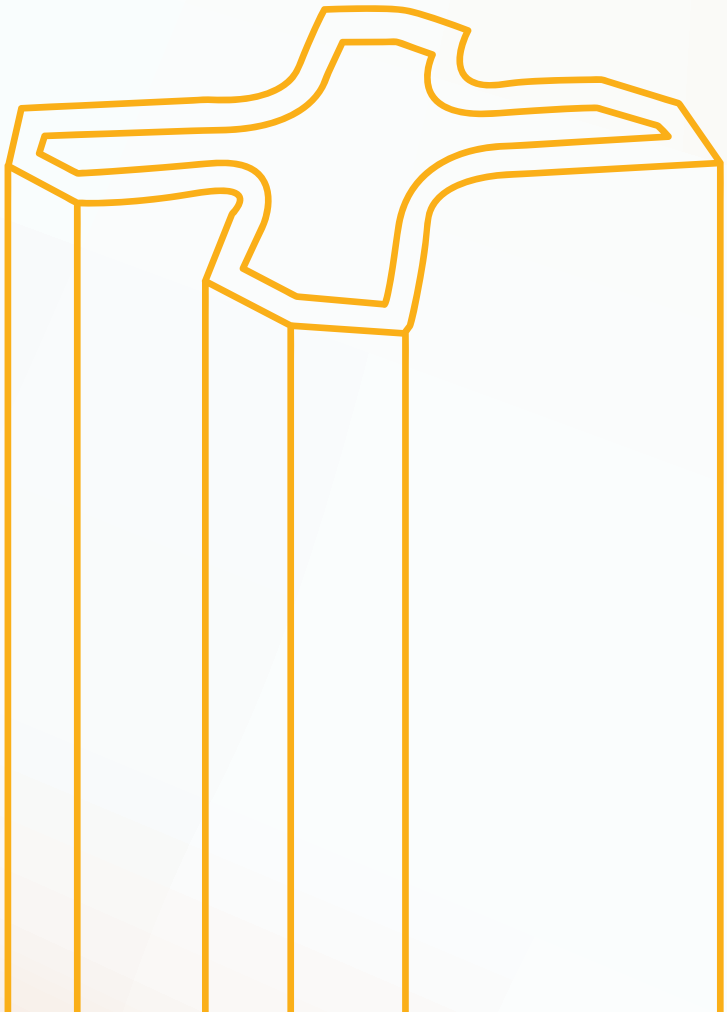
ENERGY STORAGE SOLUTIONS

SOLAX POWER



WE ARE SOLAX

To be the trusted global leader in smart energy solutions

OUR PROFILE

Founded in 2012, SolaX Power has been a leading global provider of solar and storage solutions. Being a public company (stock code: 688717 on SSE STAR Market) and one of Asia's pioneering hybrid inverter manufacturers, SolaX Power has matured into a multinational corporation, boasting a workforce exceeding 3,000 employees worldwide. With its headquarters situated in Hangzhou, China, and additional branches strategically located in the Netherlands, Germany, the UK, Australia, Japan, and the US, SolaX Power extends its services to customers across more than 80 countries.

2012
Founded

2024
Publicly Traded

3,000+
Employees

80+
Markets

700,000
Running systems

500
Top 500 Global New Energy Enterprises

A PUBLICLY TRADED ENTERPRISE

THE LEADING SOLAR ENERGY STORAGE SOLUTION PROVIDER

.3
GLOBAL TOP

Sales revenue for complete residential solar energy storage systems
(source: CPIA)

10-100kW storage inverter supplier market share
(source: IHS)

INNOVATION AT OUR CORE

200+ GLOBAL PATENTS

First Hybrid Inverter	R&D Centers	R&D Staff	R&D Staff Ratio
2013	04	1,000+	30%+

1,100+

GLOBAL CERTIFICATIONS

CONTENTS


SOLAX

OVERVIEW

INNOVATING SINCE 2012

At SolaX Power, our journey in energy storage development has been marked by a relentless commitment to innovation and excellence. Founded with a singular focus on energy storage, SolaX Power boasts a robust R&D department brimming with top-tier talent. We are one of the few companies in the industry with the R&D capability for the synergistic integration of energy storage inverters and batteries, and we excel in mass production of these critical components. Additionally, we possess the ability to independently develop and produce Battery Management Systems (BMS) and continuously optimize the BMS algorithm to enhance the overall performance, reliability, and safety of our energy storage batteries. Our history reflects our unwavering dedication to advancing energy storage technology and delivering superior solutions worldwide.

2013
X-Hybrid inverter G1 (low voltage)

2014
X-Hybrid inverter G2

2015
SolaX Box all-in-one ESS

2016
X-Hybrid inverter G1
(low voltage)

2017
SolaX Box all-in-one ESS G2
AC coupled inverter

2018
Triple Power Battery
4.5kWh, 6.3kWh G1

THE LEADING SOLAR ENERGY STORAGE SOLUTION PROVIDER

12 R&D YEARS
of Expertise in Solar Energy Storage Solutions

2019
Triple Power Battery 5.8kWh G2
A1-ESS G1 for US

2020
J1-ESS for Japan

2021
X-ESS G4

2022
A1-ESS G2 for US

2023
X3-ULTRA

2024
X3-AELIO
ESS-AELIO
ESS-TRENE


SOLAX
POWER

ENERGY STORAGE PRODUCTS

Energy Storage Inverter

Single-phase Residential Hybrid Inverter

X1-HYBRID G4

3.0kW / 3.7kW / 5.0kW / 6.0kW / 7.5kW

Smart Management

- VPP ready, ancillary service in power market
- Global MPP scan for optimal energy harvest
- Smart loads management (e.g. heat pump, smart EV charger)
- Intelligent ToU-driven energy management
- CT compatibility with fast load response in just 0.3 seconds

Assured Reliability

- Up to 150% EPS output for 10s
- UPS-level switchover time <10ms
- IP65 Ingress protection
- Type II SPD on AC&DC side

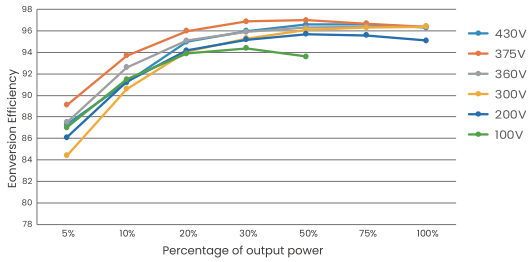
High Performance

- 200% PV oversizing and up to 110% AC output
- Up to 200% PV input
- Up to 97% efficiency in charging and discharging
- Low start-up voltage for longer operation

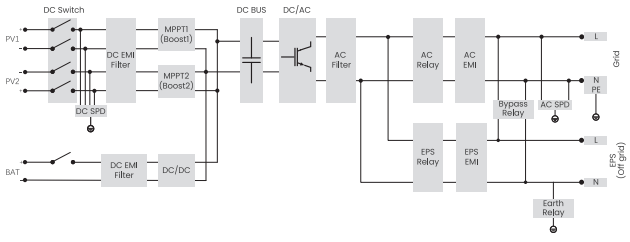
Flexible Adaptability

- Lithium & Lead-acid battery compatible
- Max. 16A DC input current for high power solar panel
- On-grid and off-grid parallel function, up to 15kW

Efficiency Curve



Circuit Diagram



	X1-HYBRID-3.0-D	X1-HYBRID-3.7-D	X1-HYBRID-5.0-D	X1-HYBRID-6.0-D	X1-HYBRID-7.5-D
PV INPUT					
Max. recommended PV array power	6.0 kWp	7.4 kWp	10.0 kWp	12.0 kWp	15.0 kWp
Max. PV input voltage①	600 V				
Rated PV input voltage	360 V				
Operation voltage range	70 ~ 550 V				
MPPT voltage range②	70 ~ 550 V				
Start-up voltage	90 V				
No. of MPP trackers / Strings per MPP tracker	2 (1 / 1)				
Max. input current per MPPT	16 A / 16 A				
Max. input short circuit current per MPPT	20 A / 20 A				
AC INPUT & OUTPUT (ON-GRID)					
Rated output power	3000 W	3680 W	5000 W (Germany 4600 W, AU 4999 W)	6000 W	7500 W
Max. output apparent power	3300 VA	3680 VA	5500 VA (4600 VA for VDE4105, 4999 VA for AS4777)	6600 VA	7500 VA
Max. output continuous current	14.4 A	16.0 A	23.9 A (Germany 20 A, AU 21.7 A)	28.6 A	32.6 A
Rated AC voltage	1 / N / PE, 220 / 230 / 240 V				
Max. AC input apparent power	6300 VA	7360 VA	9200 VA	9200 VA	9200 VA
Max. AC input current	27.4 A	32.0 A	40.0 A	40.0 A	40.0 A
Nominal AC frequency	50 Hz / 60 Hz				
THDi (rated power)	< 2%				
BATTERY					
Battery type	Lithium / Lead - acid				
Battery voltage range	80 ~ 480 V				
Max. charge / discharge current	30 A				
EPS (OFF-GRID) OUTPUT (WITH BATTERY)					
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz				
Rated EPS output power	3000 VA	3680 VA	5000 VA	6000 VA	7500 VA
Peak EPS output power	6000 VA, 10 s	6000 VA, 10 s	7500 VA, 10 s	9000 VA, 10 s	11250 VA, 10 s
Switchover time	< 10 ms				
EFFICIENCY					
Max. efficiency	97.6%				
European efficiency	97.0%				
ENVIRONMENT LIMIT					
Ingress protection	IP65				
Operation temperature range	-35 ~ 60°C (> 45°C derating)				
Max. operation altitude	3000 m				
Relative humidity	4 ~ 100% RH (condensing)				
GENERAL					
Dimensions (W × H × D)	482 × 417 × 181 mm				
Net weight	24 kg				25 kg
Cooling concept	Natural cooling				Smart air cooling
Communication interfaces	CT / Meter (optional), External control RS485, Dongle interface, DRM, NTC (optional)				
Certification	VDE-AR-N 4105, G99, G98, AS/NZS4777, EN50549, CEI 0-21, C10/11 IEC61727, RD1699, NRS 097-2-1, PEA/MEA, VFR2019, PPDS				
PROTECTION					
Protections	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection				
Active anti-islanding method	Frequency shift				
Surge protection	DC: Type Ⅱ, AC: Type Ⅱ				
Arc-fault circuit interrupter (AFCI)	Optional				

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection

Single-phase Residential Hybrid Inverter

X1-VAST

5kW / 6kW / 8kW / 10kW

Smart Management

- V2G/V2H ready for smart home energy integration*
- Smart Schedule, Smart Scene, and 7×24h TOU
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)*
- Wireless meter compatibility
- Support whole-home load without extra devices

Assured Reliability

- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms
- Type II SPD on AC&DC side
- Optional AFCI protection*

High Performance

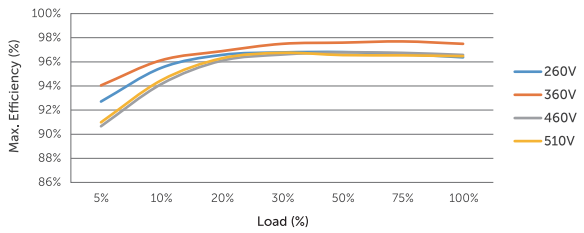
- 20A DC input per MPPT with 4 trackers
- 200% PV oversizing and high power capacity
- Low PV start-up voltage of 50V

Flexible Adaptability

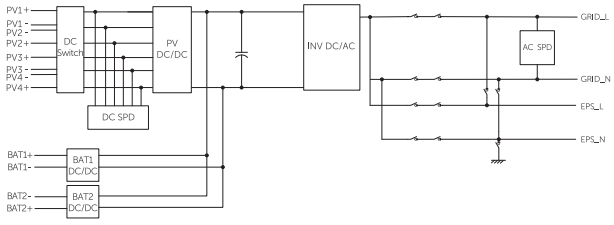
- Dual battery ports & 2-in-1 function for expansion
- Dedicated multi-device connections for streamlined cabling
- Functional and stylish wiring cover
- Microgrid and generator compatible for resilient off-grid solutions

** Feature to be upgraded in the future*

Efficiency Curve



Circuit Diagram



V1.6 Information may be subject to modify without notice. 650.00081.00

	X1-VAST-5K	X1-VAST-6K	X1-VAST-8K	X1-VAST-10K
		PV INPUT		
Max. recommended PV array power	10 kWp	12 kWp	16 kWp	20 kWp
Max. PV input voltage①	600 V			
Nominal PV input voltage	360 V			
Operating voltage range	40 ~ 560 V			
MPPT voltage range②	40 ~ 560 V			
Start-up voltage	50 V			
No. of MPP trackers / Strings per MPP tracker	3 / (1 / 1 / 1)		4 / (1 / 1 / 1 / 1)	
Max. input current per MPPT(MPPT1/2/3)	20 A / 20 A / 20 A		20 A / 20 A / 20 A / 20 A	
Max. input short circuit current per MPPT(MPPT1/2/3)	25 A / 25 A / 25 A		25 A / 25 A / 25 A / 25 A	
		AC INPUT & OUTPUT(ON-GRID)		
Rated output power	4999 W	6000 W	8000 W	9999 W
Rated output current	21.8 A	26.1 A	34.8 A	43.5 A
Max. output apparent power	4999 VA	6000 VA	8000 VA	9999 VA
Max. output continuous current	21.8 A	26.1 A	34.8 A	43.5 A
Max. AC input apparent power	14500 VA			
Max. AC input current	63 A			
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)			
THDi (rated power)	< 2%			
		BATTERY		
Battery type	Lithium			
Battery voltage range	80 ~ 480 V			
Max. charge / discharge current③	50 A (25 A × 2)			
		EPS (OFF-GRID) OUTPUT (WITH BATTERY)		
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz			
Rated EPS output power	5000 VA (4999 VA for Australia)	6000 VA	8000 VA	10000 VA (9999 VA for Australia)
Peak EPS output power	2 times of rated power, 10 s			
Switchover time	< 10 ms			
		EFFICIENCY		
Max. efficiency	97.6%			
		ENVIRONMENT LIMIT		
Ingress protection	IP66			
Operating ambient temperature range④	-35 ~ 60°C			
Max. operating altitude	3000 m			
Relative humidity	4 ~ 100% RH (condensing)			
		GENERAL		
Dimensions (W × H × D)	590 × 400 × 180 mm			
Net weight	28 ± 2 kg			
Cooling concept	Nature cooling			
Communication interfaces	CT/Meter (optional), External control RS485, Dongle interfce , DRM			
Topology	Transformerless			
Certificates and approvals	EN / IEC62109 -1 / -2, AS / NZS 4777, G99, EN 50549-10, BR140, IEC61727, IEC 61683, RD1699, NRS 097-2 -1, PEA / MEA, VFR2019			
		PROTECTION		
Protections	DC isolation protection, DC reverse-polarity protection, Residual current detection, Over temperature protection			
Active anti-islanding method	Frequency shift			
Surge protection (DC / AC)	DC: Type II, AC: Type II			
Arc-fault circuit interrupter (AFCI)	Optional			

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ If each of the two battery ports is connected to a separate battery, it's 25A per port. If one port is connected to a single battery, it's 30A. If both ports are connected to a single battery using a 2-in-1 splitter cable(sold separately), it's 50A.
④ Derating above +45°C

*Manufactured in China

Three-phase Residential Hybrid Inverter

X3-HYBRID G4

5.0kW / 6.0kW / 8.0kW / 10.0kW / 12.0kW / 15.0kW

Smart Management

- VPP ready, ancillary service in power market
- Global MPP scan for optimal energy harvest
- Smart loads management(e.g. heat pump, smart EV charger)
- Intelligent ToU-driven energy management

Assured Reliability

- Up to 200% EPS overload output for 10 seconds*
- UPS-level switchover time <10ms
- IP65 Ingress protection
- Type II SPD on AC&DC side

High Performance

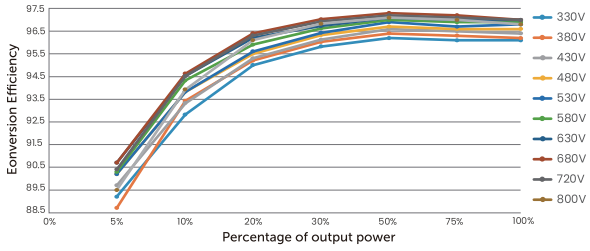
- 200% PV oversizing and up to 110% AC output
- Up to 97.5% efficiency in charging and discharging
- Up to 200% PV input
- Three-phase unbalanced output: Max. 5kW per phase

Flexible Adaptability

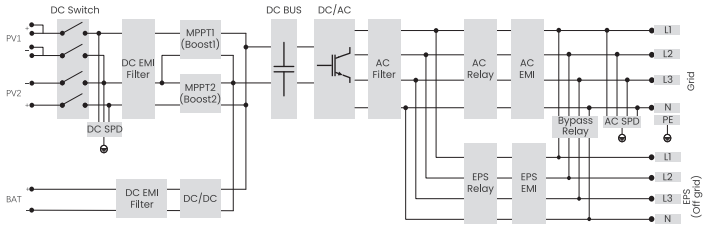
- Lithium & Lead-acid battery compatible
- On-grid and off-grid parallel function, up to 150kW
- Max. 28A input per MPPT, optimized for high-power solar panels.
- Quick configuration via U-disk

Overload capabilities vary by model. Please refer to the specification page for detailed information

Efficiency Curve



Circuit Diagram



*V3.8 Information may be subject to modify without notice. 650.00010.00

	X3-HYBRID-5.0-D	X3-HYBRID-6.0-D	X3-HYBRID-8.0-D	X3-HYBRID-10.0-D	X3-HYBRID-12.0-D	X3-HYBRID-15.0-D
PV INPUT						
Max. recommended PV array power	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V					
Rated PV input voltage	640 V					
MPPT voltage range②	180 ~ 950 V					
Start-up voltage	200 V					
No. of MPP trackers / strings per MPP tracker	2 (1 / 1)		2 (2 / 1)			
Max. input current per MPPT③	16 A / 16 A		28 A / 16 A			
Max. input short circuit current per MPPT	20 A / 20 A		35 A / 20 A			
AC INPUT & OUTPUT (ON-GRID)						
Rated output power	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW
Rated output current	7.2 A	8.7 A	11.6 A	14.5 A	17.5 A	21.8 A
Max. output apparent power	5.5 kVA	6.6 kVA	8.8 kVA	11.0 kVA	13.2 kVA	15.0 kVA
Max. output continuous current	8.1 A	9.7 A	12.9 A	16.1 A	19.3 A	24.1 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V					
Max. AC input apparent power	10 kVA	12 kVA	16 kVA	20 kVA	20 kVA	20 kVA
Max. AC input current	16.1 A	19.3 A	25.8 A	32.0 A	32.0 A	32.0 A
Rated AC frequency	50 Hz / 60 Hz					
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)					
THDi (rated power)	< 3%					
BATTERY						
Battery type	Lithium / Lead-acid					
Battery voltage range④	120 ~ 800 V					
Max. charge / discharge current	30 A					
EPS (OFF-GRID) OUTPUT (WITH BATTERY)						
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz					
Rated EPS output power	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	12.0 kVA, 10 s	12.0 kVA, 10 s	18.0 kVA, 10 s	18.0 kVA, 10 s	22.5 kVA, 10 s	22.5 kVA, 10 s
Switchover time	< 10 ms					
EFFICIENCY						
Max. efficiency	98.0%					
European efficiency	97.7%					
ENVIRONMENT LIMIT						
Ingress protection	IP65					
Operation temperature range	-35 ~ 60°C (> 45°C derating)					
Max. operation altitude	3000 m					
Relative humidity	4 ~ 100% RH (condensing)					
Overvoltage category	Mains: Ⅲ, Battery: Ⅱ, PV: Ⅱ					
GENERAL						
Dimensions (W × H × D)	503 × 503 × 199 mm					
Net weight	30 ± 1 kg					
Cooling concept	Natural cooling				Smart air cooling	
Communication interfaces	CT / Meter (optional), External control RS485, Pocket WiFi (Optional: Pocket LAN/4G), DRM, NTC (optional)					
Power consumption (night)	< 40 W for standby, < 5 W for idle					
Topology	Non-isolated					
Certifications	EN/IEC62109-1/-2, VDE4105, G99, G98, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR					
PROTECTION						
Protections	DC reverse-polarity protection, DC isolation protection, Residual current detection, AC overcurrent protection, AC short-circuit protection, Over / under voltage protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Over temperature protection					
Active anti-islanding method	Frequency shift					
Surge protection	DC: Type Ⅱ, AC: Type Ⅱ					
Arc-fault circuit interrupter (AFCI)	Optional					

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ When PV1 is connected to 2 strings, the maximum input current is 28A; when PV1 is connected to 1 string, the maximum input current is 20A
④ Compatible with a minimum of 3 units of HS25/HS36 batteries, but if the total voltage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup

Three-phase Residential Hybrid Inverter

X3-HYB G4 PRO

4kW / 5kW / 6kW / 8kW
10kW / 12kW / 15kW

Smart Management

- V2X ready for smart home energy integration
- Smart Schedule, Smart Scene, and 7*24h ToU
- Wireless meter compatibility
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)*

Assured Reliability

- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms
- Optional Rapid Shutdown function for enhanced safety
- Type II SPD on AC&DC side
- Optional AFCI protection*

High Performance

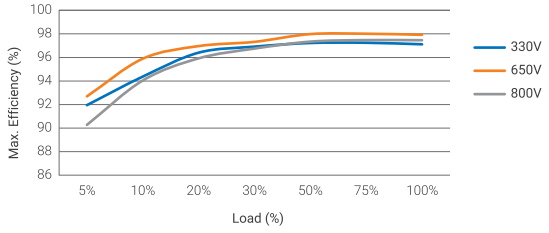
- 20A DC input per MPPT with 3 trackers
- 200% PV oversizing and up to 110% AC output
- Ultra-wide MPPT range of 110-950V

Flexible Adaptability

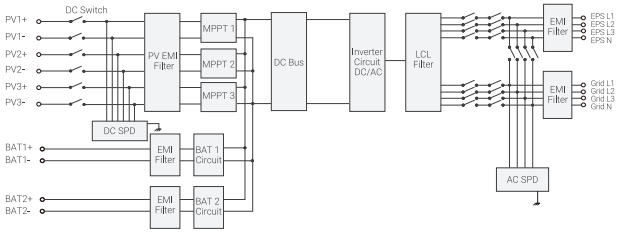
- Dual battery ports & 2-in-1 function for expansion
- Additional ports for simplified wiring and installation
- Functional and stylish wiring cover
- Microgrid and generator modes for versatile operations

** Feature to be upgraded in the future*

Efficiency Curve (15kW)



Circuit Diagram



	X3-HYB-4.0-P	X3-HYB-5.0-P	X3-HYB-6.0-P	X3-HYB-8.0-P	X3-HYB-10.0-P	X3-HYB-12.0-P	X3-HYB-15.0-P
PV INPUT							
Max. recommended PV array power	8 kWp	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V						
Rated PV input voltage	650 V						
Operation voltage range	110 ~ 950 V						
MPPT voltage range②	110 ~ 950 V						
Start-up voltage	120 V						
No. of MPP trackers / strings per MPP tracker	2 (1 / 1)			3 (1 / 1 / 1)			
Max. input current per MPPT	20 A / 20 A			20 A / 20 A / 20 A			
Max. input short circuit current per MPPT	25 A / 25 A			25 A / 25 A / 25 A			
AC INPUT & OUTPUT (ON-GRID)							
Rated output power	4000 W	5000 W (AS 4777 4999 W)	6000 W	8000 W	10000 W (AS 4777 9999 W)	12000 W	15000 W (AS 4777 14999 W)
Rated output current	5.8 A	7.2 A	8.7 A	11.6 A	14.5 A	17.5 A	21.8 A
Max. output apparent power	4400 VA	5500 VA (AS 4777 4999 VA)	6600 VA	8800 VA	11000 VA (AS 4777 9999 VA)	13200 VA	16500 VA (AS 4777 14999 VA)
Max. output continuous current	6.7 A	8.4A	10A	13.4 A	16.7 A	20.0 A	25.0 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V						
Max. AC input apparent power	8.4 kVA	10.5 kVA	12.6 kVA	16.8 kVA	21.0 kVA		
Max. AC input current	12.2 A	15.2 A	18.2 A	24.3 A	30.4 A		
Rated AC frequency	50 Hz / 60 Hz						
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz						
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)						
THDi (rated power)	< 3%						
BATTERY							
Battery type	Lithium						
Battery voltage range④	120 ~ 800 V						
Max. charge / discharge current⑤	50 A (25 A × 2)						
EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz						
Rated EPS output power	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10 s						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operation temperature range	-35 ~ 60°C (> 45°C derating)						
Max. operation altitude	3000 m						
Relative humidity	0 ~ 100% RH (condensing)						
Overvoltage category	Mains: III, Battery: II, PV: II						
GENERAL							
Dimensions (W × H × D)	560 × 503 × 210 mm						
Net weight	38 kg						
Cooling concept	Natural cooling					Smart air cooling	
Communication interfaces	COM1 (Parallel 1, Parallel 2, BMS 1, BMS 2, RS485, Meter / CT); COM2 (DI/DO, EVC, XHUB, DRM, V2X, Heatpump)						
Power consumption (night)	< 40 W for standy, < 5 W for idle						
Topology	Non-isolated						
Certifications	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012, VDE-AR-N 4105, G98, G99, AS4777, EN50549, CEI 0-21						
PROTECTION							
Protection	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Residual current detection, Over temperature protection, AC overcurrent protection, AC short-circuit protection						
Active anti-islanding method	Frequency shift						
Surge protection	DC: Type II, AC: Type II						
Arc-fault circuit interrupter (AFCI)	Optional						

①The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter ②Input voltage exceeding the MPPT voltage range may trigger inverter protection ③The AC frequency range may vary from different country codes ④Compatible with a minimum of 3 units of HS25/HS36 batteries, but if the total voltage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup ⑤If only one port is connected to a single battery, it's 30A. If both ports are connected to a single battery using a 2-in-1 splitter cable (sold separately), it's 50A

Three-phase C&I Hybrid Inverter

X3-ULTRA

15kW / 19.9kW / 20kW
25kW / 30kW

Smart Management

- Single unit UPS-level switchover time <10ms
- Built-in shadow tracking
- Smart loads management(e.g. heat pump, smart EV charger)
- Loads respond time within 0.3 s
- VPP ready with a variety of compatibility (OpenADR, IEEE2030.5, FCAS, API)*

Assured Reliability

- IP66 Ingress protection
- Type II SPD on AC&DC side
- Optional AFCI protection

High Performance

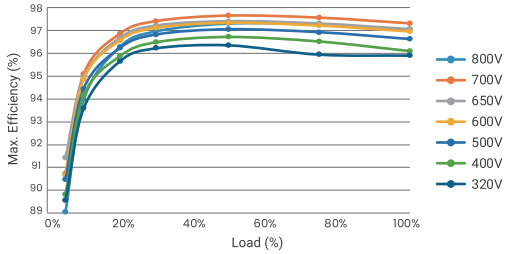
- 200% PV oversizing and up to 110% AC output
- 200% EPS overload for 10s
- Max. 60A charging / discharging current
- Low start-up voltage for more power generation

Flexible Adaptability

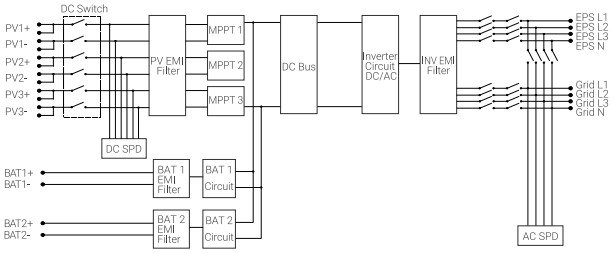
- Max. 10pcs parallel for on-grid and off-grid
- Microgrid and generator function for versatile operations
- Max. 36A PV input per MPPT, optimized for high-power solar panel

** Feature to be upgraded in the future*

Efficiency Curve



Circuit Diagram



	X3-ULT-15K	X3-ULT-15KP	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-20KP	X3-ULT-25K	X3-ULT-30K
PV INPUT							
Max. recommended PV array power	30 kWp		40 kWp			50 kWp	60 kWp
Max. PV input voltage①	1000 V						
Rated PV input voltage	600 V						
Operation voltage range	120 ~ 950 V						
MPPT voltage range②	160 ~ 950 V						
Start-up voltage	200 V						
No. of MPP trackers / strings per MPP tracker	2 / (2 / 2)	3 / (2 / 2 / 2)	2 / (2 / 2)		3 / (2 / 2 / 2)		
Max. input current per MPPT (MPPT1/2/3)	36 A / 36 A	36 A / 36 A / 36 A	36 A / 36 A		36 A / 36 A / 36 A		
Max. input short circuit current per MPPT (MPPT1/2/3)	45 A / 45 A	45 A / 45 A / 45 A	45 A / 45 A		45 A / 45 A / 45 A		
AC INPUT & OUTPUT (ON-GRID)							
Rated output power	15000 W (AS4777 14999 W)		19999 W	20000 W	20000 W	25000 W (VDE4105 24900 W)	30000 W (AS4777 29999 W, VDE4105 29900 W)
Rated output current	21.8 A		29.0 A	29.0 A	29.0 A	36.3. A	43.5 A
Max. output apparent power	16500 VA (AS4777 14999 VA)		19999 VA	22000 VA	22000 VA	27500 VA (VDE4105 24900 VA)	30000 VA (AS4777 29999 VA, VDE4105 29900 VA)
Max. output continuous current	24.0 A (AS4777 21.8 A)		29.0 A	31.9 A	31.9 A	39.9 A (VDE4105 36.3 A)	43.5 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V						
Max. AC input apparent power	15000 VA		19999 VA	20000 VA	20000 VA	25000 VA	30000 VA
Max. AC input current	21.8 A		29.0 A	29.0 A	29.0 A	36.3 A	43.5 A
Rated AC frequency	50 Hz / 60 Hz						
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)						
THDi (Rated power)	< 3%						
BATTERY							
Battery type	Lithium						
Battery voltage range③	120 ~ 800 V						
Max. charge / discharge current	60 A (30 A × 2)						
EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz						
Rated EPS output power	15000VA		19999 VA	20000 VA		25000 VA	30000 VA
Peak EPS output power	2 times of rated power, 10 s						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operation temperature range	-35 ~ 60°C (> 45°C derating)						
Max.operation altitude	3000 m						
Relative humidity	0 ~ 100% RH (condensing)						
Overvoltage category	Mains: III, Battery: II, PV: II						
GENERAL							
Dimensions (W × H × D)	696 × 526 × 240 mm						
Net weight	47 kg						
Cooling concept	Smart air cooling						
Communication interfaces	Meter (RS-485), DI x 2, DO x 1, Modbus						
Power consumption (night)	< 5 W						
Topology	Non-isolated						
Certifications	VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR						
PROTECTION							
Protections	Over / under voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current monitoring						
Active anti-islanding method	Frequency shift						
Surge protection	DC: Type II, AC: Type II						
Arc-fault circuit interrupter (AFCI)	Optional						

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter
② Input voltage exceeding the MPPT voltage range may triggers inverter protection
③ Compatible with a minimum of 3 units of HS Series batteries, but if the total voltage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup

Single-phase Low-voltage Residential Hybrid Inverter

X1-HYB-LV

3.0kW / 3.7kW / 4.0kW
5.0kW / 6.0kW

Smart Management

- Single unit UPS-level switchover time < 4 ms
- Global MPP scan for optimal energy harvest
- Smart loads management
- CT compatibility with fast load response in just 0.3 seconds

Assured Reliability

- Battery terminal temperature detection
- IP65 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection*

High Performance

- 200% PV oversizing and up to 110% AC output
- 200% peak EPS power for 10 s
- Max. 120A charging / discharging current
- Low start-up voltage for longer operation

Flexible Adaptability

- Max. 10pcs parallel for on-grid and off-grid*
- Microgrid and generator function for versatile operations*
- Max. 16A DC input current for high-power solar panel

** Feature to be upgraded in the future*

**V1.7.1 Information may be subject to modify without notice. 650.00023.00*

	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
PV INPUT					
Max. recommended PV array power	6000 Wp	7360 Wp	8000 Wp	10000 Wp	12000 Wp
Max. PV input voltage①	550 V				
Nominal PV input voltage	360 V				
MPPT voltage range②	80 ~ 520 V				
Start-up voltage	110 V				
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)				
Max. input current per MPPT(MPPT1/2)	16 A / 16 A				
Max. input short circuit current per MPPT(MPPT1/2)	20 A / 20 A				
AC INPUT & OUTPUT(ON-GRID)					
Rated output power	3000 W	3680 W	4000 W	5000 W	6000 W
Max. output apparent power	3300 VA	3680 VA	4400 VA	5000 VA	6000 VA
Max. output continuous current	15.0 A	16.0 A	20.0 A	22.7 A	27.3 A
Nominal AC voltage	1 / N / PE, 220 / 230 / 240 V				
Max. AC input apparent power	6000 VA	7360 VA	8000 VA	9200 VA	
Max. AC input current	26.1 A	32.0 A	34.8 A	40.0 A	
Nominal AC frequency	50 Hz / 60 Hz				
THDi (rated power)	< 3%				
BATTERY					
Battery type	Lithium / Lead - acid				
Battery voltage range	40 ~ 60 V				
Max. charge / discharge current	75 A			120 A	
EPS (OFF-GRID) OUTPUT (WITH BATTERY)					
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz				
Peak EPS output power	6000 VA, 10 s	7360 VA, 10 s	8000 VA, 10 s	10000 VA, 10 s	12000 VA, 10 s
Switchover time	< 4 ms				
EFFICIENCY					
Max. efficiency	97.6%				
European efficiency	97.0%				
ENVIRONMENT LIMIT					
Ingress protection	IP65				
Operating ambient temperature range③	-25 ~ 60°C				
Max. operating altitude	3000 m				
Relative humidity	4 ~ 100% RH (condensing)				
GENERAL					
Dimensions (W × H × D)	397 × 490 × 201 mm				
Net weight	16.5 kg			17.3 kg	
Cooling concept	Natural cooling			Smart cooling	
Communication interfaces	CAN, RS485, CT, Meter, NTC, WiFi, WiFi+LAN				
Topology	Transformerless for PV side / HF for battery side				
Certificates and approvals	NRS 097-2-1, IEC 61727, IEC 62116, PEA, MEA, BIS, EN IEC 62109-1 / -2				
PROTECTION					
Protections	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Back feed current monitoring, Residual current detection, Active anti-islanding method, Over temperature protection				
Arc-fault circuit interrupter (AFCI)	optional				

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ Derating above +45°C

Single-phase Low-voltage Residential Hybrid Inverter

X1-Lite-LV

8kW / 10kW / 12kW

Smart Management

- Smart loads management
- Single unit UPS-level switchover time < 8ms
- Global MPP scan for optimal energy harvest*

Assured Reliability

- Battery terminal temperature detection
- IP65 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection*

High Performance

- 200% PV oversizing and up to 110% AC output
- 200% peak EPS power for 10s*
- Max. 250A charging / discharging current
- Low start-up voltage for longer operation

Flexible Adaptability

- Max. 10pcs parallel for on-grid and off-grid*
- Microgrid and generator function for versatile operations
- Max. 32A input per string, optimized for high-power solar panels.

** Feature to be upgraded in the future*

**V1.1. Information may be subject to modify without notice. 650.00061.00*

	X1-Lite-8.0-LV	X1-Lite-10.0-LV	X1-Lite-12.0-LV
PV INPUT			
Max. recommended PV array power	16 kWp	20 kWp	24 kWp
Max. PV input voltage①	600 V		
Nominal PV input voltage	360 V		
Operating voltage range	50 ~ 550 V		
MPPT voltage range②	50 ~ 550 V		
Start-up voltage	110 V		
No. of MPP trackers / Strings per MPP tracker	2 / (2 / 2)		3 / (2 / 2 / 2)
Max. input current per MPPT(MPPT1/2/3)	32 A / 32 A		32 A / 32 A / 32 A
Max. input short circuit current per MPPT(MPPT1/2/3)	40 A / 40 A		40 A / 40 A / 40 A
AC INPUT & OUTPUT (ON-GRID)			
Rated output power	8000 W	10000 W	12000 W
Rated output current	34.8 A	43.5 A	52.2 A
Max. output apparent power	8800 W	11000 W	13200 W
Max. output continuous current	40 A	50 A	60 A
Nominal AC voltage	1 / N / PE, 220 / 230 / 240 V		
Max. AC input apparent power	12650 VA	14950 VA	18400 VA
Max. AC input current	55 A	65 A	80 A
Nominal AC frequency	50 Hz / 60 Hz		
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz		
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)		
THDi (Rated power)	< 3%		
BATTERY			
Battery type	Lithium / Lead - acid		
Battery voltage range	40 ~ 60 V		
Max. charge / discharge current	190 A	220 A	250 A
EPS (OFF-GRID) OUTPUT (WITH BATTERY)			
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz		
Rated EPS output power	8 kVA	10 kVA	12 kVA
Peak EPS output power	2 times of rated power, 10 s		
Switchover time	< 8 ms		
EFFICIENCY			
Max. efficiency	97.6%		
European efficiency	97.0%		
ENVIRONMENT LIMIT			
Ingress protection	IP65		
Operating ambient temperature range	-25 ~ 60°C		
Max. operating altitude	3000 m		
Relative humidity	4 ~ 100% RH (condensing)		
Overvoltage Category	Mains: Ⅲ, Battery: Ⅱ, PV: Ⅱ		
GENERAL			
Dimensions (W × H × D)	462 × 651 × 280 mm		
Net weight	38.5 kg		
Cooling concept	Smart cooling		
Communication interfaces	LED + LCD / CAN, RS485, CT, Meter, NTC, WiFi+LAN		
Power consumption (night)	< 20 W		
Topology	Non-isolated		
Certificates and approvals	IEC/EN 62109-1/-2, NRS 097-2-1, IEC 61727, IEC 62116, PEA, MEA, BIS		
PROTECTION			
Protection	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Over temperature protection		
Active anti-islanding method	Frequency shift		
Surge protection (DC / AC)	DC: Type Ⅱ, AC: Type Ⅱ		

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The AC frequency range may vary from different country codes

Three-phase Low-voltage Residential Hybrid Inverter

X3-NEO-LV

5kW / 8kW / 10kW
12kW / 15kW

Smart Management

- Single unit UPS-level switchover time <3 ms
- Dedicated load interface for intelligent load management
- Global MPP scan for optimal energy harvest

Assured Reliability

- Battery terminal temperature detection
- IP65 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection*

High Performance

- 200% PV oversizing and up to 110% AC output
- 200% peak EPS power for 10 s
- Max. 300A charging / discharging current
- Low start-up voltage for longer operation

Flexible Adaptability

- Max. 10pcs parallel for on-grid and off-grid*
- Microgrid and generator function for versatile operations
- Max. 36A DC input per MPPT, optimized for high-power solar panel

** Feature to be upgraded in the future*

	X3-NEO-5K-LV	X3-NEO-8K-LV	X3-NEO-10K-LV	X3-NEO-12K-LV	X3-NEO-15K-LV
PV INPUT					
Max. recommended PV array power	10 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V				
Nominal PV input voltage	640 V				
Operating voltage range	160 ~ 950 V				
MPPT voltage range②	160 ~ 950 V				
Start-up voltage	150 V				
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)		2 / (2 / 1)	2 / (2 / 2)	
Max. input current per MPPT(MPPT1/2)	18 A / 18 A		36 A / 18 A	36 A / 36 A	
Max. input short circuit current per MPPT(MPPT1/2)	25 A / 25 A		50 A / 25 A	50 A / 50 A	
AC INPUT&OUTPUT (On-Grid)					
Rated output power	5 kW	8 kW	10 kW	12 kW	15 kW
Rated output current	7.3 A	11.6 A	14.5 A	15.3 A	17.4 A
Max. output apparent power	5.5 kVA	8.8 kVA	11 kVA	13.2 kVA	16.5 kVA
Max. output continuous current	8.4 A	13.4 A	16.8 A	20.0A	25.0 A
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V				
Max. AC input apparent power	10 kVA	16 kVA	20 kVA	24 kVA	30 kVA
Max. AC input current	15.2 A	24.3 A	30.4 A	36.4 A	45.5 A
Nominal AC frequency	50 Hz / 60 Hz				
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz				
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)				
THDi (rated power)	< 3%				
BATTERY					
Battery type	Lithium / Lead - acid				
Battery voltage range	40 ~ 60 V				
Max. charge / discharge current	125 A	200 A	250 A	280 A	300 A
EPS (OFF-GRID) OUTPUT (WITH BATTERY)					
Rated EPS output power	5 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10 s				
Switchover time	< 3 ms				
EFFICIENCY					
Max. efficiency	97.6%				
European efficiency	97.0%				
ENVIRONMENT LIMIT					
Ingress protection	IP65				
Operating ambient temperature range④	-25 ~ 60°C				
Max. operating altitude	3000 m				
Relative humidity	4 ~ 100% RH (condensing)				
Overvoltage Category	Mains: Ⅲ, Battery: Ⅱ, PV: Ⅱ				
GENERAL					
Dimensions (W × H × D)	520 × 705 × 258 mm				
Net weight	44.6 kg				
Cooling concept	Smart cooling				
Communication interfaces	LED+LCD / CAN, RS485, CT, Meter, NTC, WiFi+LAN				
Power consumption (night)	< 15 W				
Topology	Non-isolated				
Certificates and approvals	EN IEC 62109-1 / -2, NRS 097-2-1, IEC 61727, IEC 62116, PEA, MEA, BIS				
PROTECTION					
Protections	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Residual current detection, Over temperature protection				
Active anti-islanding method	Frequency shift				
Surge protection (DC / AC)	DC: Type Ⅱ, AC: Type Ⅱ				

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The AC frequency range may vary from di fferent country codes
④ Derating above +45°C

ENERGY STORAGE PRODUCTS

Energy Storage Battery

High-voltage Battery System

T-BAT-SYS-HV-S2.5

5.12kWh ~ 33.28kWh

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- Unique battery heating tech for low-temperature operation
- Optional parallel connection using a two-in-one cable for easy capacity expansion and extend battery lifespan

Assured Reliability

- LFP battery cell & high-performance processors
- IP65 Ingress protection
- Soft start to protect from a sudden surge

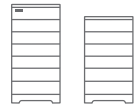
High Performance

- 5.1-33.2 kWh wide capacity range
- Max. 50A charging/discharging current
- Cycle life > 6000 cycles

Flexible Adaptability

- Extendable capacity for lifetime use
- Stackable modules, plug and play design

	T-BAT HS5.0	T-BAT HS7.5	T-BAT HS10.0	T-BAT HS12.5	T-BAT HS15.0	T-BAT HS17.5
Number of mudules	 2	 3	 4	 5	 6	 7
GENERAL INFORMATION						
Rated energy	5.12 kWh	7.68 kWh	10.24 kWh	12.80 kWh	15.36 kWh	17.92 kWh
Usable energy (90%DOD)①	4.6 kWh	6.9 kWh	9.2 kWh	11.5 kWh	13.8 kWh	16.1 kWh
Rated voltage	102.4 V	153.6 V	204.8 V	256.0 V	307.2 V	358.4 V
Operation voltage range	90 ~ 116 V	135 ~ 174 V	180 ~ 232 V	225 ~ 290 V	270 ~ 349 V	315 ~ 406 V
Recommend charge / discharge current②	30 A					
Max. charge / discharge current②③	50 A					
Rated power②	3.1 kW	4.6 kW	6.1 kW	7.7 kW	9.2 kW	10.8 kW
Max. power②	5.12 kW	7.68 kW	10.24 kW	12.80 kW	15.36 kW	17.92 kW
Depth of discharge	90%					
Communication interface	RS485, CAN					
Dimensions (W × H × D)	510 × 522 × 365 mm	510 × 659.5 ×365 mm	510 × 797 × 365 mm	510 × 934.5 × 365 mm	510 × 1072 × 365 mm	510 × 1209.5 × 365 mm

	T-BAT HS20.0	T-BAT HS22.5	T-BAT HS25.0	T-BAT HS27.5	T-BAT HS30.0	T-BAT HS32.5
Number of mudules	 8	 9	 10	 11	 12	 13
GENERAL INFORMATION						
Rated energy	20.48 kWh	23.04 kWh	25.60 kWh	28.16 kWh	30.72 kWh	33.28 kWh
Usable energy (90%DOD)①	18.4 kWh	20.7 kWh	23.0 kWh	25.3 kWh	27.6 kWh	29.9 kWh
Rated voltage	409.6 V	460.8 V	512.0 V	563.2 V	614.4 V	665.6 V
Operation voltage range	360 ~ 465 V	405 ~ 522 V	450 ~ 580 V	495 ~ 636 V	540 ~ 695 V	585 ~ 750 V
Recommend charging / discharging current③	30 A					
Max. charge / discharge current②③	50 A					
Rated power③	12.3 kW	13.8 kW	15.4 kW	16.9 kW	18.4 kW	20.0 kW
Max. power③	20.48 kW	23.04 kW	25.60 kW	28.16 kW	30.72 kW	33.28 kW
Depth of discharge	90%					
Communication interface	RS485, CAN					
Dimensions (W × H × D)	510 × 1347 × 365 mm	510 × 1484.5 × 365 mm	510 × 934.5 × 365 mm + 510 × 934.5 × 365 mm	510 × 1072 × 365 mm + 510 × 934.5 × 365 mm	510 × 1072 × 365 mm + 510 × 1072 × 365 mm	510 × 1209.5 × 365 mm + 510 × 1072 × 365 mm

BMS	
Model	TBMS-MCS0800
Dimensions (W × H × D)	510 × 157 × 365 mm
Net weight	13 kg
BATTERY MODEL	
Battery model	TP-HS25
Battery type	LFP
Battery module	2.5 kWh
Dimensions (W × H × D)	510 × 152 × 365 mm
Net weight	34 kg
Installation type	Stackable
SERIES BOX	
Dimensions (W × H × D)	510 × 157 × 365 mm
Net weight	10 kg
ENVIRONMENTAL REQUIREMENTS	
Installation	Floor mounting
Charge temperature	-30 ~ +53°C (with heating function) 0 ~ +53°C (without heating function)
Discharge temperature	-30 ~ +53°C (with heating function) -20 ~ +53°C (without heating function)
Max. operation altitude	3000 m
Environment	Outdoor / indoor (*please refer to the user manual for installation condition)
Ingress protection	IP65
Relative humidity	4 ~ 100% RH (condensing)
STANDARD	
Certifications	IEC 62619, IEC 60730, IEC 62040, CE, UN38.3

① Test conditions: 90% DOD, 0.2C charge & discharge @25°C ② Max. charge / discharge current may be variant with different inverter models
③ Recommend / Max. charging / discharging current* / rated / Max. power*: recommend / Max. charging / discharging current and nominal / Max. power derating will occur related to temperature and SOC

High-voltage Battery System

T-BAT-SYS-HV-S3.6

7.37kWh ~ 47.92kWh

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- Unique battery heating tech for low-temperature operation
- Optional parallel connection using a two-in-one cable for easy capacity expansion and extend battery lifespan

Assured Reliability

- LFP battery cell & high-performance processors
- IP65 Ingress protection
- Soft start to protect from a sudden surge

High Performance

- 7.3-47.9 kWh wide capacity range
- Max. 50A charging/discharging current
- Cycle life > 6000 cycles

Flexible Adaptability

- Extendable capacity for lifetime use
- Stackable modules, plug and play design

	T-BAT HS7.2	T-BAT HS10.8	T-BAT HS14.4	T-BAT HS18.0	T-BAT HS21.6	T-BAT HS25.2
Number of modules	 2	 3	 4	 5	 6	 7
GENERAL INFORMATION						
Rated energy	7.37 kWh	11.06 kWh	14.75 kWh	18.43 kWh	22.12 kWh	25.80 kWh
Usable energy(90% DOD)①	6.6 kWh	10.0 kWh	13.3 kWh	16.6 kWh	19.9 kWh	23.2 kWh
Rated voltage	102.4 V	153.6 V	204.8 V	256.0 V	307.2 V	358.4 V
Operation voltage range	90 ~ 116 V	135 ~ 174 V	180 ~ 232 V	225 ~ 290 V	270 ~ 349 V	315 ~ 406 V
Recommend charge / discharge current③	35 A					
Max. charge / discharge current②③	50 A					
Rated power③	3.5 kW	5.3 kW	7.1 kW	8.9 kW	10.7 kW	12.5 kW
Max. power③	5.1 kW	7.6 kW	10.2 kW	12.8 kW	15.3 kW	17.9 kW
Depth of discharge	90%					
Communication interfaces	RS485, CAN					
Dimensions (W × H × D)	510 × 522 × 365 mm	510 × 659.5 ×365 mm	510 × 797 × 365 mm	510 × 934.5 × 365 mm	510 × 1072 × 365 mm	510 × 1209.5 × 365 mm

	T-BAT HS28.8	T-BAT HS32.4	T-BAT HS36.0	T-BAT HS39.6	T-BAT HS43.2	T-BAT HS46.8
Number of modules	 8	 9	 10	 11	 12	 13
GENERAL INFORMATION						
Rated energy	29.49 kWh	33.18 kWh	36.86 kWh	40.55 kWh	44.24 kWh	47.92 kWh
Usable energy(90% DOD)①	26.5 kWh	29.9 kWh	33.2 kWh	36.5 kWh	39.8 kWh	43.1 kWh
Rated voltage	409.6 V	460.8 V	512.0 V	563.2 V	614.4 V	665.6 V
Operation voltage range	360 ~ 465 V	405 ~ 522 V	450 ~ 580 V	495 ~ 636 V	540 ~ 695 V	585 ~ 750 V
Recommend charge / discharge current③	35 A					
Max. charge / discharge current②③	50 A					
Rated power③	14.3 kW	16.1 kW	17.9 kW	19.7 kW	21.5 kW	23.3 kW
Max. power③	20.4 kW	23.0 kW	25.6 kW	28.1 kW	30.7 kW	33.2 kW
Depth of discharge	90%					
Communication interfaces	RS485, CAN					
Dimensions (W × H × D)	510 × 1347 × 365 mm	510 × 1484.5 × 365 mm	510 × 934.5 × 365 mm + 510 × 934.5× 365 mm	510 × 1072 × 365 mm + 510 × 934.5× 365 mm	510 × 1072 × 365 mm + 5510 × 1072 × 365 mm	510 × 1209.5 × 365 mm + 5510 × 1072 × 365 mm

BMS	
Model	TBMS-MCS0800
Dimensions (W × H × D)	510 × 157 × 365 mm
Net weight	13 kg
BATTERY MODEL	
Battery model	TP-HS36
Battery type	LFP
Battery module	3.6 kWh
Dimensions (W × H × D)	510 × 152 × 365 mm
Net weight	34 kg
SERIES BOX	
Dimensions (W × H × D)	510 × 157 × 365 mm
Net weight	10 kg
ENVIRONMENTAL REQUIREMENT	
Installation	Floor mounting
Charge temperature	-30 ~ +53°C (with heating function) 0 ~ +53°C (without heating function)
Discharge temperature	-30 ~ +53°C (with heating function) -20 ~ +53°C (without heating function)
Max. operation altitude	3000 m
Environment	Outdoor / indoor (*please refer to the user manual for installation condition)
Ingress protection	IP65
Relative humidity	4 ~ 100% RH (condensing)
STANDARD	
Certifications	IEC 62619, IEC 60730, IEC 62040, CE, UN38.3

① Test conditions: 90% DOD, 0.2C charge & discharge @25°C ② Max. charge / discharge current may be variant with different inverter models
③ Recommend / Max. charging / discharging current* / rated / Max. power*: recommend / Max. charging / discharging current and nominal / Max. power derating will occur related to temperature and SOC

High-voltage Battery System

T-BAT H 3.0 V2

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- Unique battery heating tech for low-temperature operation

Assured Reliability

- LFP battery cell & high-performance processors
- Safety Certifications: CE, UN38.3, etc.
- IP65 Ingress protection

High Performance

- Cycle life > 6000 Cycles
- High capacity utilization
- Efficient energy transfer

Flexible Adaptability

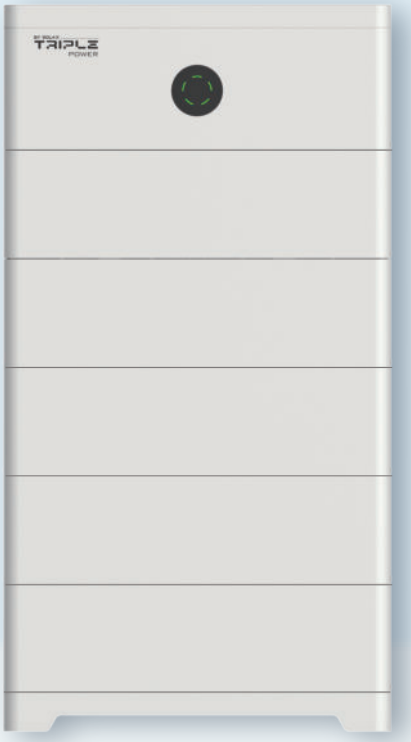
- Compatible with BMS-Parallel Box-II G2 , up to 2 towers of batteries
- Stackable modules, supporting floor mounting

T-BAT H 3.0 V2

	T-BAT H 3.0 T-BAT H 3.0 V2	T-BAT H 6.0 T-BAT H 6.0 V2	T-BAT H 9.0 T-BAT H 9.0 V2	T-BAT H 12.0 T-BAT H 12.0 V2
Rated voltage	102.4 V	204.8 V	307.2 V	409.6 V
Operation voltage range	90 ~ 116 V	180 ~ 232 V	270 ~ 348 V	360 ~ 464 V
Total energy	3.1 kWh	6.1 kWh	9.2 kWh	12.3 kWh
Usable energy①	2.8 kWh	5.5 kWh	8.3 kWh	11.0 kWh
Rated capacity	30 Ah			
Rated power	2.5 kW	5.1 kW	7.6 kW	10.2 kW
Max. power	3.1 kW	6.1 kW	9.2 kW	12.3 kW
Recommend charge / discharge current	25 A			
Max. charge / discharge current②	30 A			
Battery roundtrip efficiency	95%			
Cycle life [90% DOD]	> 6000 cycles			
Warranty	10 years			
Charge temperature	-30 ~ +50°C (with heating function) 0 ~ +50°C (without heating function)			
Discharge temperature	-30 ~ +50°C (with heating function) -20 ~ +50°C (without heating function)			
Storage temperature	-20 ~ 30°C (12 months) 30 ~ 50°C (6 months)			
Relative humidity	4 ~ 100% RH (condensing)			
Max. operation altitude	3000 m			
Ingress protection	IP65			
Battery to Inverter	RS485 / CAN2.0			
Battery to battery / BMS	CAN2.0			
Master control capacity indicator	4 LED (25%, 50%, 75%, 100%)			
Master control LED indicator (working mode)	1 LED			
System switch (on / off)	Button × 1 + Breaker × 1			
Certifications	CE, IEC62619, IEC62040, UKCA, VDE2510, RoHS			
UN number	UN3480			
Hazardous materials classification	Class 9			
UN transportation testing requirements	UN 38.3			
Dimensions (W × H × D)	MC0600: 482.5 ×173.5 × 153 mm HV10230: 482.5 × 471.5 × 153 mm			
Net weight	MC0600: 7.5 kg + HV10230: 34.5 kg	MC0600: 7.5 kg + 2 × HV10230: 69 kg	MC0600: 7.5 kg + 3 × HV10230: 103.5 kg	MC0600: 7.5 kg + 4 × HV10230: 138 kg

① Test conditions: 90% DOD, 0.2C charge & discharge @25 °C
② Max. charge / discharge current may be variant with different inverter models

High-voltage Battery System



TSYS-HS51

10.2kWh ~ 66.5kWh

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- Unique battery heating tech and wide temperature tolerance
- Optional parallel connection using a two-in-one cable for easy capacity expansion and extend battery lifespan

Assured Reliability

- IP66 Ingress protection
- LFP battery cell & high-performance processors

High Performance

- 10.2 - 66.5 kWh wide capacity range
- Max. 70A charging / discharging current
- Cycle life > 6000 cycles

Flexible Adaptability

- Compatible with TCBox-70, up to 3 towers of batteries
- Compact and stackable for easy installation
- Supporting direct battery expansion

	T-HS10.2	T-HS15.3	T-HS20.4	T-HS25.6	T-HS30.7	T-HS35.8
GENERAL INFORMATION						
Number of modules	2	3	4	5	6	7
Rated energy	10.2 kWh	15.3 kWh	20.4 kWh	25.6 kWh	30.7 kWh	35.8 kWh
Usable energy (90% DOD)①	9.1 kWh	13.7 kWh	18.3 kWh	23.0 kWh	27.6 kWh	32.2 kWh
Rated voltage	102.4 V	153.6 V	204.8 V	256.0 V	307.2 V	358.4 V
Operation voltage range	85 ~ 116 V	128 ~ 174 V	170 ~ 232 V	212 ~ 289 V	255 ~ 347 V	297 ~ 405 V
Rated operation current③	60 A					
Maximum operation current②③	70 A					
Rated power③	6.1 kW	9.2 kW	12.3 kW	15.4 kW	18.4 kW	21.5 kW
Max. power③	7.2 kW	10.8 kW	14.3 kW	17.9 kW	21.5 kW	25.1 kW
Depth of discharge	90%					
Communication interfaces	CAN + RS485					
Dimensions (W x H x D)	600 × 621 × 376 mm	600 × 789 × 376 mm	600 × 957 × 376 mm	600 × 1125 × 376 mm	600 × 1293 × 376 mm	600 × 1461 × 376 mm

	T-HS40.9	T-HS46.0	T-HS51.2	T-HS56.3	T-HS61.4	T-HS66.5
GENERAL INFORMATION						
Number of modules	8	9	10	11	12	13
Rated energy	40.9 kWh	46.0 kWh	51.2 kWh	56.3 kWh	61.4 kWh	66.5 kWh
Usable energy (90% DOD)①	36.8 kWh	41.4 kWh	46.0 kWh	50.6 kWh	55.2 kWh	59.8 kWh
Rated voltage	409.6 V	460.8 V	512.0 V	563.2 V	614.4 V	665.6 V
Operation voltage range	340 ~ 463 V	382 ~ 520 V	424 ~ 578 V	467 ~ 636 V	509 ~ 694 V	552 ~ 750 V
Rated operation current③	60 A					
Maximum operation current②③	70 A					
Rated power③	24.6 kW	27.6 kW	30.7 kW	33.8 kW	36.9 kW	39.9 kW
Max. power③	28.7 kW	32.3 kW	35.8 kW	39.4 kW	43.0 kW	46.6 kW
Depth of discharge	90%					
Communication interfaces	CAN + RS485					
Dimensions (W x H x D)	600 × 1629 × 376 mm	600×957×376mm +600×1125×376mm	600×1125×376mm +600×1125×376mm	600×1293×376mm +600×1125×376mm	600×1293×376mm +600×1293×376mm	600×1461×376mm +600×1293×376mm

BMS	
Model	TBMS-S51-8
Dimensions (W × H × D)	600 × 225 × 376 mm
Net weight	18.5 kg
BATTERY MODEL	
Model	TB-HS51
Battery type	LFP
Cycel life (90% DOD)	> 6000 cycles
Module capacity	5.1 kWh
Dimensions (W x H x D)	600 × 168 × 376 mm
Net weight	46 kg
Installation type	Stackable
SERIES BOX	
Dimensions (W × H × D)	600 × 225 × 376 mm
Net weight	15 kg
ENVLRONMENTAL REQULREMENTS	
Installation	Floor mounting
Charge temperature	-30 ~ +53°C (with heating function) -20 ~ +53°C (without heating function)
Discharge temperature	-30 ~ +53°C (with heating function) -20 ~ +53°C (without heating function)
Relative humidity	4 ~ 100% RH (non-condensing)
Max. operation altitude	3000 m
Environment	Outdoor / indoor
Ingress protection	IP66
STANDARD	
Certifications	IEC62619, IEC62040, EN62477, VDE 2510
Transport testing requirement	UN38.3

① Test conditions: 90% DOD, 0.2C charge & discharge @ 25°C
② Max. charge / discharge current may be variant with different inverter models
③ Rated/ maximum operation current and rated / maximum power derating will occur related to temperature or SOC

High-voltage Battery System

T-BAT H 5.8

(Master)

T-BAT H 5.8 V2

(Master)

HV11550 / HV11550 V2

(Slave)

High Performance

- 90% Depth of Discharge (DOD)
- Cycle life > 6000 times

Assured Reliability

- LiFePO4 battery cell & high-performance processors
- IP65 protection degree
- No toxic heavy metals or caustic materials

Smart Management

- Remote fault diagnosis, upgrade and maintenance

Flexible Adaptability

- Floor or wall mounting optional

**V2.9.1 Information may be subject to modify without notice.650.00012.00*

	T-BAT H 5.8 T-BAT H 5.8 V2	T-BAT H 11.5 T-BAT H 11.5 V2	T-BAT H 17.3 T-BAT H 17.3 V2	T-BAT H 23 T-BAT H 23 V2
NOMINAL CHARACTER				
Nominal voltage	115.2 V	230.4 V	345.6 V	460.8 V
Operating voltage	100 ~ 131 V	200 ~ 262 V	300 ~ 393 V	400 ~ 524 V
Battery type	Li-ion (LFP)			
Total capacity	5.8 kWh	11.5 kWh	17.3 kWh	23.0 kWh
Usable capacity①	5.1 kWh	10.4 kWh	15.5 kWh	20.7 kWh
Battery roundtrip efficiency	95%			
Standard power	2.8 kW	5.7 kW	8.6 kW	11.5 kW
Max power	4.0 kW	8.0 kW	12.0 kW	16.1 kW
Recommend charge / discharge current	25 A			
Max charge / discharge current	35 A			
Short circuit current	760 A			
Cycle life	> 6000 cycles			
Warranty	10 years			
ENVIRONMENT REQUIREMENT				
Operating temperature	Charge: 0 ~ 55°C / Discharge: -10 ~ 55°C			
Full-load operating temperature	5 ~ 48°C			
Storage temperature	-20 ~ 30°C (12 months) , 30 ~ 55°C (6 months)			
Relative humidity	4 ~ 100% RH (condensing)			
Altitude	< 2000 m			
Ingress protection	IP65			
COMMUNICATION				
System to inverter	CAN2.0			
Battery to battery / BMS	RS485			
Data collection port / FW update	CAN2.0			
Master control working mode indicator	1 LED			
Master control capacity indicator	4 LED (25%, 50%, 75%, 100%)			
Battery module LED	2 LED			
Reset	Button			
Switch ON / OFF	Button × 1 + breaker × 1			
STANDARD				
Safety (V1)	CE, IEC 62619, UKCA, VDE2510, JIS-C 8715, UL1973, FCC, REACH			
Safety (V2)	CE, IEC 62040, IEC 62619, UKCA, VDE2510, RoHS, REACH			
UN number	UN3480			
Hazardous materials classification	Class 9			
Transport testing requirement	UN38.3			
GENERAL				
Dimensions (L × W × H)	474 × 193 × 708 mm	474 × 193 × 708 mm + 474 × 193 × 647 mm	474 × 193 × 708 mm + (474 × 193 × 647 mm) × 2	474 × 193 × 708 mm + (474 × 193 × 647 mm) × 3
Weight	72.2 kg	72.2 kg + 68.5 kg	72.2 kg + 68.5 kg × 2	72.2 kg + 68.5 kg × 3

① Test conditions: 90% DOD, 0.2C charger & discharger @+25°C

* X3 Hybrid inverter can connect 2-4pcs of T58 batteries (1pc of T58 master, and rest 1-3pcs of T58 slave)
* X1 Hybrid inverter can connect 1-3pcs of T58 batteries (1pc of T58 master, without T58 slave, or with 1-2pcs of T58 slave)
* With BMS Parallel Box-II, the maximum battery quantity connected on each inverter varies, please kindly check datasheet of BMS Parallel Box-II
* Maximum Charge/Discharge Current may be variant with different inverter models
* HV11550 V1 and HV11550 V2 share the same appearance

High-voltage Battery System

T-BAT-SYS-HV-R2.5

5.1kWh ~ 33.2kWh

High Performance

- Max. 50A charging / discharging current
- Cycle life > 6000 times

Assured Reliability

- LiFePO4 battery cell (50Ah)
- No toxic heavy metals or caustic materials

Smart Management

- Remote fault diagnosis, upgrade and maintenance

Flexible Adaptability

- Space-efficient design enables straightforward installation in tight areas
- Extendable from 5kWh to 33kWh per string

**V3.8. Information may be subject to modify without notice. 650.00013.00*

T-BAT-SYS-HV-R2.5

SYSTEM PARAMETERS	
Voltage range	89.6 ~ 759.2 V
Recommend charge / discharge current	30 A
Max charge / discharge current	50 A
Available charge / discharge temperature range	Charge: 0 ~ 50°C Discharge: -20 ~ 50°C
Warranty	10 years
Cycle life	> 6000 Cycles
System capacity	2 ~ 13 Batteries
Communication interface	RS485, CAN
Protection class	IP20
Cabinet size (L × W × H) (L-rail is required)	600 × 600 × 1166 mm (22U) 1BMS + 6 Battery Modules 600 × 600 × 2055 mm (42U) 1BMS + 13 Battery Modules
BATTERY MODULE	
Model	TP-HR25
Specification	50 Ah
Nominal voltage	51.2 V
Operating voltage	44.8 ~ 58.4 V
Battery type	Li-ion (LFP)
Total energy	2.56 kWh
Usable energy①	2.3 kWh
Faradic charge efficiency	99%
Battery roundtrip efficiency	95%
Nominal power	1.2 kW
Dimensions (L × W × H)	442 × 391 × 130 mm
Weight	28 kg
BMS	
Model	TBMS-MCR0800
Dimensions (L × W × H)	442 × 391 × 130 mm
Weight	8 kg

① Test conditions: 90% DOD, 0.2C charger & discharger @+25°C

* The number of batteries that can be connected in series in a single string depends on the battery side voltage of the inverter, and the battery voltage needs to be calculated according to the maximum voltage of a single battery.

High-voltage Battery System

T-BAT-SYS-HV-R3.6

7.3kWh ~ 47.8kWh

High Performance

- Max. 50A charging / discharging current
- Cycle life > 6000 times

Assured Reliability

- LiFePO4 battery cell (72Ah)
- No toxic heavy metals or caustic materials

Smart Management

- Remote fault diagnosis, upgrade and maintenance

Flexible Adaptability

- Space-efficient design enables straightforward installation in tight areas
- Extendable from 7.3kWh to 47.8kWh per string

**V3.2. Information may be subject to modify without notice. 650.00014.00*

	T-BAT-SYS-HV-R3.6
SYSTEM PARAMETERS	
Voltage range	89.6 ~ 759.2 V
Recommend charge / discharge current	35 A
Max charge / discharge current	50 A
Available charge / discharge temperature range	Charge: 0 ~ 50°C Discharge: -20 ~ 50°C
Warranty	10 years
Cycle life	> 6000 Cycles
System capacity	2 ~ 13 Batteries
Communication interface	RS485, CAN
Protection class	IP20
Cabinet size (L × W × H) (L-rail is required)	600 × 600 × 1166 mm (22U) 1BMS + 6 Battery Modules 600 × 600 × 2055 mm (42U) 1BMS + 13 Battery Modules
BATTERY MODULE	
Model	TP-HR36
Specification	72 Ah
Nominal voltage	51.2 V
Operating voltage	44.8 ~ 58.4 V
Battery type	Li-ion (LFP)
Total energy	3.68 kWh
Usable energy①	3.31 kWh
Battery roundtrip efficiency	95%
Nominal power	1.7 kW
Dimensions (L × W × H)	442 × 391 × 130 mm
Weight	31 kg
BMS	
Model	TBMS-MCR0800
Dimensions (L × W × H)	442 × 391 × 130 mm
Weight	8 kg

① Test conditions: 90% DOD, 0.2C charger & discharger @+25°C

* The number of batteries that can be connected in series in a single string depends on the battery side voltage of the inverter, and the battery voltage needs to be calculated according to the maximum voltage of a single battery.

Low-voltage Battery System

T-BAT-SYS-LV-R25

2.5kWh ~ 40.9kWh

High Performance

- Cycle life > 6000 times
- High capacity utilization
- Efficient energy transfer

Assured Reliability

- LiFePO4 battery cell & high-performance processors
- IP20 protection degree
- Soft start to protect from BAT and INV a sudden surge

Smart Management

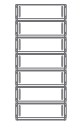
- Remote fault diagnosis, upgrade and maintenance

Flexible Adaptability

- Wall quick bracket, or cabinet mounting optional
- Easy to scale up

**V1.3.1 Information may be subject to modify without notice.650.00035.00*

T-BAT-SYS-LV-R2.5

SYSTEM DATA								
TYPE / MODEL	T-BAT LR2.5	T-BAT LR5.0	T-BAT LR7.5	T-BAT LR10.0	T-BAT LR12.5	T-BAT LR15.0	T-BAT LR17.5	T-BAT LR20.0
Number of modules	 1 Module	 2 Modules	 3 Modules	 4 Modules	 5 Modules	 6 Modules	 7 Modules	 8 Modules
Nominal capacity	2.5 kWh	5.1 kWh	7.6 kWh	10.2 kWh	12.8 kWh	15.3 kWh	17.9 kWh	20.4 kWh
Usable capacity (90% DOD)①	2.3 kWh	4.6 kWh	6.9 kWh	9.2 kWh	11.5 kWh	13.8 kWh	16.1 kWh	18.4 kWh
Max.output current	50 A	85 A	120 A	120 A	120 A	120 A	120 A	120 A
Peak discharge current	60 A (60 s) 100 A (15 s)	120 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)

SYSTEM DATA								
TYPE / MODEL	T-BAT LR22.5	T-BAT LR25.0	T-BAT LR27.5	T-BAT LR30.0	T-BAT LR32.5	T-BAT LR35.0	T-BAT LR37.5	T-BAT LR40.0
Number of modules	 9 Modules	 10 Modules	 11 Modules	 12 Modules	 13 Modules	 14 Modules	 15 Modules	 16 Modules
Nominal capacity	23.0 kWh	25.6 kWh	28.1 kWh	30.7 kWh	33.2 kWh	35.8 kWh	38.4 kWh	40.9 kWh
Usable capacity (90% DOD)①	20.7 kWh	23.0 kWh	25.3 kWh	27.6 kWh	29.9 kWh	32.2 kWh	34.5 kWh	36.8 kWh
Max.output current	120 A	120 A	120 A	120 A	120 A	120 A	120 A	120 A
Peak discharge current	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)

GENERAL INFO	
Nominal voltage	51.2 V
Operating voltage range	45 ~ 58 V
Battery type	Lithium iron phosphate
Communication port	CAN + RS485
Working temperature	0 ~ 55°C (charge) -20 ~ 55°C(discharge)
Storage temperature	30 ~ 50°C (6 months) -20 ~ 30°C (12 months)
IP rating of enclosure	IP20
Cooling type	Natural cooling
T-BAT LR2.5 Dimensions (L × W × H)	442 × 420 × 130 mm
T-BAT LR2.5 Weight	30 kg
Relative humidity	5 ~ 95% RH (Non-condensing)
Altitude	< 3000 m
Warranty	10 years
Cycle life (90% DOD)	> 6000 cycles
Certification	IEC62619, IEC62040, CE, UN38.3

①Test conditions: 90% DOD, 0.2C charger & discharger @+25 °C
Note: The battery system consists of 2 to 16 modules.

Low-voltage Battery System

T-BAT-SYS-LV-R36

3.6kWh ~ 58.8kWh

High Performance

- Long cycle life > 6000 times
- High capacity utilization
- Efficient energy transfer

Assured Reliability

- LiFePO4 battery cell & high-performance processors
- No toxic heavy metals or caustic materials
- Soft start to protect BAT and INV from a sudden surge

Smart Management

- Remote fault diagnosis, upgrade and maintenance

Flexible Adaptability

- Wall quick bracket, or cabinet mounting optional
- Easy to scale up

**V1.6.1 Information may be subject to modify without notice.650.00036.00*

T-BAT-SYS-LV-R3.6

SYSTEM DATA								
TYPE / MODEL	T-BAT LR3.6	T-BAT LR7.2	T-BAT LR10.8	T-BAT LR14.4	T-BAT LR18.0	T-BAT LR21.6	T-BAT LR25.2	T-BAT LR28.8
Number of Modules	 1 Module	 2 Modules	 3 Modules	 4 Modules	 5 Modules	 6 Modules	 7 Modules	 8 Modules
Nominal capacity	3.6 kWh	7.3 kWh	11.0 kWh	14.7 kWh	18.4 kWh	22.0 kWh	25.7 kWh	29.4 kWh
Usable capacity (90% DOD)①	3.3 kWh	6.6 kWh	9.9 kWh	13.2 kWh	16.5 kWh	19.8 kWh	23.1 kWh	26.4 kWh
Max.output current	50 A	85 A	120 A	120 A	120 A	120 A	120 A	120 A
Peak discharge current	60 A (60 s) 100 A (15 s)	120 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)

SYSTEM DATA								
TYPE / MODEL	T-BAT LR32.4	T-BAT LR36.0	T-BAT LR39.6	T-BAT LR43.2	T-BAT LR46.8	T-BAT LR50.4	T-BAT LR54.0	T-BAT LR57.6
Number of Modules	 9 Modules	 10 Modules	 11 Modules	 12 Modules	 13 Modules	 14 Modules	 15 Modules	 16 Modules
Nominal capacity	33.1 kWh	36.8 kWh	40.4 kWh	44.1 kWh	47.8 kWh	51.5 kWh	55.2 kWh	58.8 kWh
Usable capacity (90% DOD)①	29.8 kWh	33.1 kWh	36.4 kWh	39.7 kWh	43.0 kWh	46.3 kWh	49.6 kWh	52.9 kWh
Max.output current	120 A	120 A	120 A	120 A	120 A	120 A	120 A	120 A
Peak discharge current	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)	150 A (60 s) 200 A (15 s)

GENERAL INFO	
Nominal voltage	51.2 V
Operating voltage range	45 ~ 58 V
Battery type	Lithium iron phosphate
Communication port	CAN, RS485
Working temperature	0 ~ 55°C (charge) -20 ~ 55°C(discharge)
Storage temperature	30 ~ 50°C (6 months) -20 ~ 30°C (12 months)
IP rating of enclosure	IP20
T-BAT LR3.6 Dimensions (L × W × H)	442 × 420 × 130 mm
T-BAT L3.6 Weight	33 kg
Cooling type	Natural cooling
Relative humidity	5 ~ 95% RH (Non-condensing)
Altitude	< 3000 m
Warranty	5 years
Cycle life (90% DOD)	> 6000 cycles
Certification	IEC62619, IEC62040, CE, UN38.3

①Test conditions: 90% DOD, 0.2C charger & discharger @+25°C

Note: The battery system consists of 2 to 16 modules.

Low-voltage Battery System

T-BAT-SYS-LV D53

High Performance

- Peak discharge current: 200A for 10s
- Cycle life > 6000 times

Assured Reliability

- LiFePO4 battery cell & high-performance processors
- IP65 protection degree

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- AI-driven intelligent algorithms for high SOC and accuracy

Flexible Adaptability

- Floor or wall mounting optional
- Modular design, expandable to 16 units in parallel

**V1.0.1 Information may be subject to modify without notice. 650.00057.00*

T-BAT-SYS-LV D53

SYSTEM PARAMETERS								
TYPE / MODEL	T-BAT LD53	T-BAT LD106	T-BAT LD159	T-BAT LD212	T-BAT LD265	T-BAT LD318	T-BAT LD371	T-BAT LD424
Number of Modules	1	2	3	4	5	6	7	8
Nominal capacity	5.3 kWh	10.6 kWh	15.9 kWh	21.2 kWh	26.6 kWh	31.9 kWh	37.2 kWh	42.5 kWh
Usable capacity (90% DOD)①	4.7 kWh	9.5 kWh	14.3 kWh	19.1 kWh	23.9 kWh	28.7 kWh	33.5 kWh	38.3 kWh
Max. output current ②	100 A	120 A						
Peak discharge current	200 A, 10s							

SYSTEM PARAMETERS								
TYPE / MODEL	T-BAT LD477	T-BAT LD530	T-BAT LD583	T-BAT LD636	T-BAT LD689	T-BAT LD742	T-BAT LD795	T-BAT LD848
Number of Modules	9	10	11	12	13	14	15	16
Nominal capacity	47.9 kWh	53.2 kWh	58.5 kWh	63.8 kWh	69.2 kWh	74.5 kWh	79.8 kWh	85.1 kWh
Usable capacity (90% DOD)①	43.1 kWh	47.9 kWh	52.7 kWh	57.5 kWh	62.3 kWh	67.0 kWh	71.8 kWh	76.6 kWh
Max. output current ②	120 A							
Peak discharge current	200 A, 10s							

GENERAL INFORMATION	
Weight	48.5 kg
Dimension (L x W x H)	645 × 150 × 430 mm
Nominal voltage	51.2 V
Operating voltage range	45 ~ 58 V
Battery type	Lithium iron phosphate
Communication port	CAN / RS485
Operation temperature	0 ~ 53°C (charge) – 20 ~ 53°C (discharge)
Storage temperature	30 ~ 50°C (6 months) – 20 ~ 30°C (12 months)
Ingress protection	IP65
Colling concept	Natural cooling
Relative humidity	5 ~ 95% RH (Non-condensing)
Altitude	< 3000 m
Warranty④	10 years
Cycle life③ [90% DOD]	> 6000
Certification	IEC62619, IEC62040, CE, UN38.3

① Test conditions: 90% DOD, 0.2C charge & discharge @+25°C
② Current is affected by the number of batteries connected in parallel as well as temperature and SOC
③ 25°C ± 2°C, 0.5C / 0.5C, 70% EOL > 6000
④ The warranty is due whichever reached first of warranty period or energy throughput

Low-voltage Battery System

T-BAT-SYS-LV D150

Smart Management

- Remote fault diagnosis, upgrade and maintenance
- AI-driven intelligent algorithms for high SOC and accuracy

Assured Reliability

- LiFePO4 battery cell & high-performance processors
- IP65 protection degree

High Performance

- Peak discharge current: 310A for 10s
- Cycle life > 6000 times

Flexible Adaptability

- Quick and easy installation
- Modular design, expandable to 16 units in parallel

**V2.3.1. Information may be subject to modify without notice. 650.00062.00*

	T-BAT-SYS-LV D150
Battery type	Lithium iron phosphate
Battery component	1P5S x 3
Nominal voltage	48 V
Operating voltage range	42 ~ 54 V
Rated capacity	314 Ah
Nominal energy	15 kWh
Usable energy (90% DOD)①	13.5 kWh
Max. charge / discharge current	155 A
Peak discharge current	310 A, 10 s
Cycel life②	＞ 6000 Cycles
Communication interfaces	CAN / RS485
Operation temperature	0 ~ 55°C (charge) -20 ~ 55°C (discharge)
Storage temperature	30 ~ 60°C (6 months) -20 ~ 30°C (1 year)
Max. parallel number	16 pcs
Dimension (L x W x H)	900 x 540 x 220 mm
Weight	125 kg
Installation type	Floor
Degree of protection	IP65
Cooling concept	Natural cooling
Warranty	5 years
Max. operation altitude	3000 m
Certification	UN38.3, IEC62619, CE

① DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C
② 25°C ± 2°C, 0.5C / 0.5C, 70 % EOL ＞ 6000

ENERGY STORAGE PRODUCTS

Energy Storage System

All-in-one Residential ESS

X1-IES

2.5kW / 3.0kW / 3.7kW / 5.0kW / 6.0kW / 8.0kW

Smart Management

- AI ready, forecasting solar generation and home consumption for smart energy management strategy control*
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)**
- Smart loads management (e.g., heat pump, smart EV charger)
- Micro-grid support for real-time grid/off-grid balancing
- Wireless meter compatibility
- Global MPP scan for optimal energy harvest

Assured Reliability

- IP66 ingress protection
- Type II SPD on AC&DC side
- AFCI protection (optional)
- UPS-level switchover time <10ms

High Performance

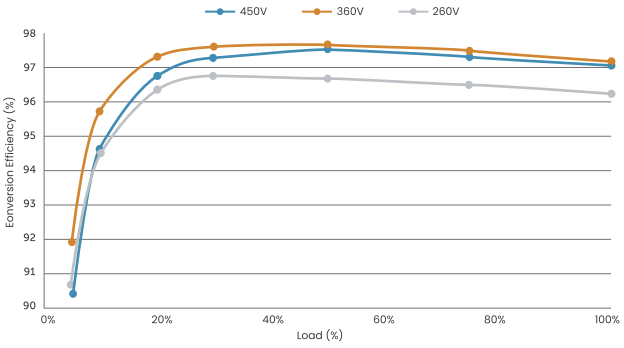
- Max. 50A charge/discharge current
- 200% oversizing and 200% PV input power
- Up to 200% EPS output for 10s
- Low start-up voltage for longer operation
- Cycle life > 6000 cycles

Flexible Adaptability

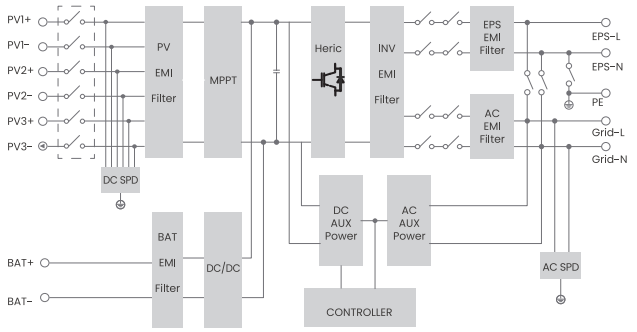
- All-in-one, plug-and-play design
- Max. 20A DC input current for high power solar panel

**Additional XHUB required*
***Feature to be upgraded in the future*

Efficiency Curve



Circuit Diagram



SYSTEM OVERVIEW

System schematic

Rated power	2.5 / 3.0 / 3.7 / 5.0 / 6.0 / 8.0 kW			
Number of batteries	1	2	3	4
Rated energy①	5.1 kWh	10.2 kWh	15.3 kWh	20.4 kWh
Usable energy②	4.6 kW	9.2 kW	13.8 kW	18.4 kW
Max. power③	5.1 kW	8.0 kW	8.0 kW	8.0 kW
Ingress protection	IP66			
Operation temperature range	-30 ~ 53°C			
Relative humidity	5 ~ 95% (No condensation)			
Max. operation altitude	3000 m			
Net weight④	87.2 kg	134.2 kg	181.2 kg	134.2 kg / 99.2 kg
Dimensions (W x H x D)	730 × 908 × 210 mm	730 × 1226 × 210 mm	730 × 1544 × 210 mm	730 × 1226 × 210 mm / 730 × 809 × 150 mm
Display	LCD			
Cooling concept	Natural cooling			
Topology	Non-isolated			
Communication interface	RS485, Pocket-X, CAN, DO, DI			

① Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
② System usable energy may vary with inverter different setting
③ The max.charge/discharge power must not exceed the rated output power (the table takes the maximum power inverter as an example)
④ Different inverter models have different weights. The heaviest one is taken as an example

	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-5K	X1-IES-6K	X1-IES-8K
PV INPUT						
Max. recommended PV array power	5.0 kWp	6.0 kWp	7.4 kWp	10.0 kWp	12.0 kWp	16.0 kWp
Max. PV input voltage①	600 V					
Rated PV input voltage	360 V					
MPPT voltage range②	40 ~ 560 V					
Start-up voltage	50 V					
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)			3 / (1 / 1 / 1)		
Max. input current per MPPT	20 A / 20 A			20 A / 20 A / 20 A		
Max. input short circuit current per MPPT	30A / 30A			30A / 30A / 30 A		
AC INPUT & OUTPUT (ON-GRID)						
Rated output power	2500 W	3000 W	3680 W	5000 W (4600 for VDE4105, 4999 for AS4777)	6000 W	8000 W
Rated output current	10.9 A	13.1 A	16.0 A	21.8 A	26.1 A	34.8 A
Max. output apparent power	2500 VA	3300 VA	3680 VA	5000 VA (4600 for VDE4105, 4999 for AS4777, 5000 for C10/11)	6600 VA	8000 VA
Max. output continuous current	10.9 A	14.4 A	16.0 A	21.8 A	28.7 A	34.8 A
Rated AC voltage	1 / N / PE, 220 / 230 / 240 V					
Max. AC input apparent power	6300 VA	6300 VA	7360 VA	9200 VA	9200 VA	9200 VA
Max. AC input current	27.4 A	27.4 A	32.0 A	40.0 A	40.0 A	40.0 A
Rated AC frequency	50 Hz / 60 Hz					
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz					
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)					
THDi (rated power)	< 3%					
BATTERY						
Operation voltage range	80 ~ 480 V					
Communication interfaces	CAN / RS485					
BMS module	TBMS-MCS0800E					
Battery module	TP-HS50E					
Composition	TBMS-MCS0800E + TP-HS50E × n + Base Dimensions + Series Box（Required for two columns）					
Battery type	Li-ion (LFP)					
Rated capacity / rated capacity④	5.1 kWh / 50 Ah					
Usable energy⑤	4.6 kWh					
Rated power	3 kW					
Max. power	5.1 kW					
Max. charge / discharge current⑥	50 A					
Cycle life	> 6000 cycles					
Warranty	10 years					
Certifications	CE, RCM, TUV (IEC62619), RoHS, REACH					
TBMS-MCS0800E dimensions (W × H × D) / net weight	730 × 165 × 150 mm / 9.3 kg					
TP-HS50E dimensions (W × H × D) / net weight	730 × 318 × 150 mm / 47 kg					
Base dimensions (W × H × D) / net weight	730 × 75 × 150 mm / 3.9 kg					

	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-5K	X1-IES-6K	X1-IES-8K
BATTERY						
Series box dimensions (W × H × D) / net weight	167 × 91.5 × 121 mm/ 1.3 kg					
EPS (OFF-GRID) OUTPUT (WITH BATTERY)						
Rated EPS output voltage, frequency	220 V, 230 V, 240 V, 50 Hz / 60 Hz					
Rated EPS output power	2500 VA	3000 VA	3680 VA	5000 VA	6000 VA	8000 VA
Peak EPS output power	2 times of rated power, 10 s					
Switchover time	< 10 ms					
EFFICIENCY						
Max. efficiency	97.6%					
European efficiency	97.0%					
ENVIRONMENT LIMIT						
Ingress protection	IP66					
Operation temperature range	-35 ~ 60°C (> 45°C derating)					
Max. operation altitude	3000 m					
Relative humidity	0 ~ 100% RH (condensing)					
GENERAL						
Dimensions (W × H × D)	717 × 350 × 210 mm					
Net weight	26.2 kg			26.4 kg		
Cooling concept	Natural cooling					
Communication interfaces	RS485, Pocket-X, CAN, DO, DI					
Power consumption (night)	< 40 W for hot standby, < 5 W for cold standby					
Topology	Non-isolated					
Certifications	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G98 / G99 / AS4777 / EN50549 / CEI 0-21					
PROTECTION						
Protections	Over voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection					
Active anti-islanding method	Frequency shift					
Surge protection	DC: Type Ⅱ, AC: Type Ⅱ					

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The AC frequency range may vary from different country codes
④ Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
⑤ System usable energy may vary with inverter different settings
⑥ Discharge: In case of the battery cell's temperature range of -20°C~10°Cand 45°C~53°C,the discharge current will be reduced; Charge: In case of the battery cell's temperature range of 0°C~25°C and 45°C~53°C, the charge current will be reduced. Product charge or discharge power depends on the actual temperature of the battery pack

All-in-one Residential ESS

X3-IES

4kW / 5kW / 6kW / 8kW / 10kW / 12kW / 15kW

Smart Management

- AI ready, forecasting solar generation and home consumption for smart energy management strategy control*
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)**
- Smart loads management (e.g., heat pump, smart EV charger)
- Micro-grid support for real-time grid/off-grid balancing
- Wireless meter compatibility
- Global MPP scan for optimal energy harvest

Assured Reliability

- IP66 ingress protection
- Type II SPD on AC&DC side
- AFCI protection (optional)
- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms

High Performance

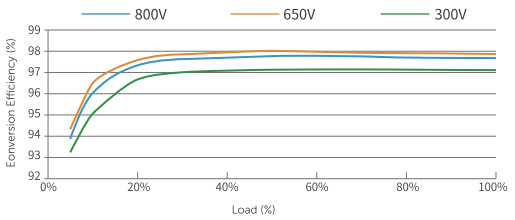
- Max. 50A charge/discharge current
- 200% oversizing and 200% PV input power
- Low start-up voltage for longer operation
- Cycle life > 6000 cycles

Flexible Adaptability

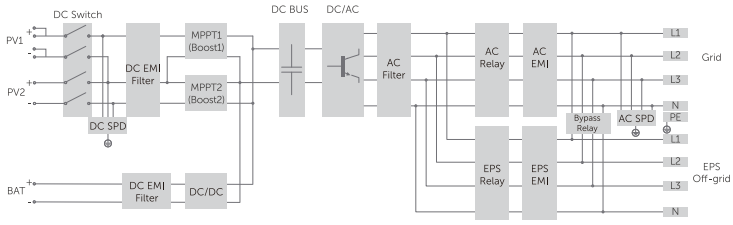
- All-in-one, plug-and-play design
- Max. 20A DC input current for high power solar panel

**Additional XHUB required*
***Feature to be upgraded in the future*

Efficiency Curve



Circuit Diagram



SYSTEM OVERVIEW

System schematic

Rated power	4 / 5 / 6 / 8 / 10 / 12 / 15 kW				
Number of batteries	2	3	4	5	6
Rated energy①	10.2 kWh	15.3 kWh	20.4 kWh	25.6 kWh	30.7 kWh
Usable energy②	9.2 kWh	13.8 kWh	18.4 kWh	23.0 kWh	27.6 kWh
Max. power③	10.2 kW	15.0 kW	15.0 kW	15.0 kW	15.0 kW
Ingress protection	IP66				
Operation temperature range	-30 ~ 53°C				
Relative humidity	5 ~ 95% (no condensation)				
Max. operation altitude	3000 m				
Net weight④	144.2 kg	191.2 kg	144.2 kg / 100.5 kg	144.2 kg / 147.5 kg	191.2 kg / 147.5 kg
Dimensions (W x H x D)	730 × 1281 × 209.5 mm	730 x 1599 x 209.5 mm	730 × 1281 × 209.5 mm / 730 × 809 × 150 mm	730 × 1281 × 209.5 mm / 730 × 1127 × 150 mm	730 × 1599 × 209.5 mm / 730 × 1127 × 150 mm
Display	LCD				
Cooling concept	Natural cooling				
Topology	Non-isolated				
Communication interface	RS485, Pocket-X, USB, CAN, DO, DI				

① Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
② System usable energy may vary with inverter different setting
③ The max.charge/discharge power must not exceed the rated output power (the table takes the maximum power inverter as an example)
④ Different inverter models have different weights. The heaviest one is taken as an example

	X3-IES-4K	X3-IES-5K	X3-IES-6K	X3-IES-8K	X3-IES-10K	X3-IES-12K	X3-IES-15K
PV INPUT							
Max. recommended PV array power	8 kWp	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V						
Rated PV input voltage	600 V						
Operation voltage range	90 ~ 950 V						
MPPT voltage range②	110 ~ 950 V						
Start-up voltage	140 V						
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)			2 / (2 / 1)			
Max. input current per MPPT	20 A / 20 A			32 A / 20 A			
Max. input short circuit current per MPPT	25 A / 25 A			40 A / 25 A			
AC INPUT & OUTPUT (ON-GRID)							
Rated output power	4000 W	5000 W	6000 W	8000 W	10000 W (AS4777 9999)	12000 W	15000 W
Rated output current	5.8 A	7.3 A	8.7 A	11.6 A	14.5 A	17.4 A	21.8 A
Max. output apparent power	4000 VA	5500 VA	6600 VA	8800 VA	10000 VA (AS4777 9999)	13200 VA	16500 VA
Max. output continuous current	5.8 A	8.0 A	9.6 A	12.8 A	14.5 A	19.2 A	24.0 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V						
Max. AC input apparent power	10 kVA	10 kVA	12 kVA	16 kVA	20 kVA	20 kVA	20 kVA
Max. AC input current	16.1 A	16.1 A	19.3 A	25.8 A	32.0 A	32.0 A	32.0 A
Rated AC frequency	50 Hz / 60 Hz						
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz						
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)						
THDi (rated power)	< 3%						
BATTERY							
Operation voltage range	160 ~ 800 V						
Communication interfaces	CAN / RS485						
BMS module	TBMS-MCS0800E						
Battery module	TP-HS50E						
Composition	TBMS-MCS0800E + TP-HS50E x n + Base Dimensions + Series Box（Required for two columns）						
Battery type	Li-ion (LFP)						
Rated capacity / rated capacity④	5.1 kWh / 50 Ah						
Usable energy⑤	4.6 kWh						
Rated power	3 kW						
Max. power	5.1 kW						
Max. charge / discharge current⑥	50 A						
Cycle life	> 6000 cycles						
Warranty	10 years						
Certifications	CE, RCM, TUV (IEC62619), RoHS, REACH						
TBMS-MCS0800E dimensions (W x H x D) / net weight	730 × 165 × 150 mm / 9.3 kg						
TP-HS50E dimensions (W x H x D) / net weight	730 × 318 × 150 mm / 47 kg						
Base dimensions (W x H x D) / net weight	730 × 75 × 150 mm / 3.9 kg						
Series box dimensions (W x H x D) / net weight	167 × 91.5 × 121 mm / 1.3 kg						

	X3-IES-4K	X3-IES-5K	X3-IES-6K	X3-IES-8K	X3-IES-10K	X3-IES-12K	X3-IES-15K
EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz						
Rated EPS output power	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10s						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operation temperature range	-35 ~ 60°C (> 45°C derating)						
Max. Operation altitude	3000 m						
Relative humidity	0 ~ 100% RH (condensing)						
Overvoltage category	Mains: Ⅲ, Battery: Ⅱ, PV: Ⅱ						
GENERAL							
Dimensions (W × H × D)	717 × 405 × 209.5 mm						
Net weight	37 kg						
Cooling concept	Natural cooling						
Communication interfaces	RS485, Pocket-X, CAN, DO, DI						
Power consumption (night)	< 40 W for hot standby, < 5 W for cold standby						
Topology	Non-isolated						
Certifications	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G98 / G99 / AS4777 / EN50549 / CEI 0-21						
PROTECTION							
Protections	Over voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current monitoring						
Active anti-islanding method	Frequency shift						
Surge protection	DC: Type Ⅱ, AC: Type Ⅱ						
Arc-fault circuit interrupter (AFCI)	Optional						

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The AC frequency range may vary from different country codes
④ Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
⑤ System usable energy may vary with inverter different settings
⑥ Discharge: In case of the battery cell's temperature range of -20°C~10°Cand 45°C~53 °C, the discharge current will be reduced; Charge: In case of the battery cell's temperature range of 0°C~25°C and 45°C~53°C, the charge current will be reduced. Product charge or discharge power depends on the actual temperature of the battery pack

All-in-one Residential ESS

X3-IES-P

8kW / 10kW / 12kW / 15kW

Smart Management

- AI ready, forecasting solar generation and home consumption for smart energy management strategy control*
- VPP ready with a variety of compatibility (OpenADR, IEEE2030.5, FCAS, API)**
- Micro-grid support for real-time balance in grid/off-grid
- Wireless meter solution
- Smart Schedule, Smart Scene, and 7*24h TOU
- Global MPP scan for optimal energy harvest

Assured Reliability

- IP66 protection degree
- Type II SPD on AC&DC side
- AFCI protection (optional)**
- Unique battery heating tech and wide temperature tolerance
- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms

High Performance

- Max. 3 MPPTs for versatile application scenarios
- 200% oversizing and 200% PV input power
- Max. 20A PV input per MPPT
- Low startup voltage for higher energy harvest

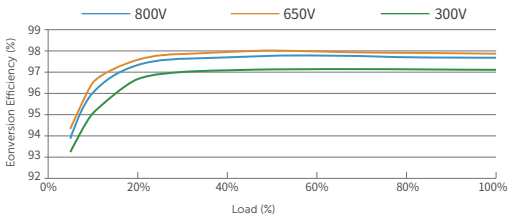
Flexible Adaptability

- All-in-one, plug-and-play design
- Support smart scene functions (e.g., heat pump, EV charger)
- Versatile installation for varied needs

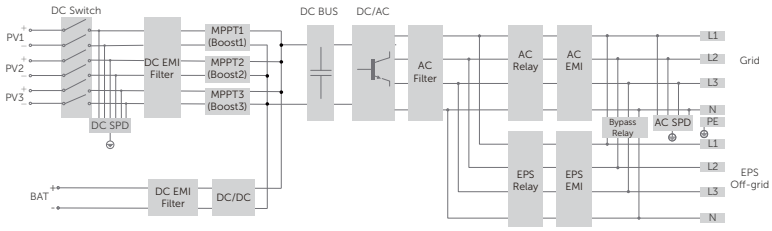
**Additional Datahub1000 required*
***Feature to be upgraded in the future*

**V1.6.1. Information may be subject to modify without notice. 650.00083.00*

Efficiency Curve



Circuit Diagram



SYSTEM OVERVIEW

System schematic

Rated output power	8 / 10 / 12 / 15 kW				
Number of batteries	2	3	4	5	6
Nominal capacity①	10.2 kWh	15.3 kWh	20.4 kWh	25.6 kWh	30.7 kWh
Usable energy②	9.2 kWh	13.8 kWh	18.4 kWh	23.0 kWh	27.6 kWh
Max. charge / discharge power③	10.2 kW	15.0 kW	15.0 kW	15.0 kW	15.0 kW
Degree of protection	IP66				
Operating temperature range	-30 ~ 53°C				
Allowable relative humidity range	5 ~ 95% (No condensation)				
Max. operating altitude	3000 m				
Net weight④	147.2 kg	194.2 kg	147.2 / 103.5 kg	147.2 / 150.5 kg	194.2 / 150.5 kg
Dimension (W x H x D)	730 × 1281 × 209.5 mm	730 x 1599 x 209.5 mm	730 × 1281 × 209.5 mm / 730 × 809 × 150 mm	730 × 1281 × 209.5 mm / 730 × 1127 × 150 mm	730 × 1599 × 209.5 mm / 730 × 1127 × 150 mm
Display	LCD				
Cooling concept	Natural cooling				
Topology	Non-isolated				
Communication	RS485, Pocket-X, USB, CAN, DO, DI				

① Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
② System usable energy may vary with inverter different setting
③ The max.charge/discharge power must not exceed the rated output power (the table takes the maximum power inverter as an example)
④ Different inverter models have different weights. The heaviest one is taken as an example

	X3-IES-8K-P	X3-IES-10K-P	X3-IES-12K-P	X3-IES-15K-P
PV INPUT				
Max. recommended PV array power	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V			
Nominal PV input voltage	600 V			
Operating voltage range	90 ~ 950 V			
MPPT voltage range②	110 ~ 950 V			
Start-up voltage	140 V			
No. of MPP trackers / Strings per MPP tracker	3 / (1 / 1 / 1)			
Max. input current per MPPT (MPPT1//2/3)	20 A / 20 A / 20 A			
Max. input short circuit current per MPPT (MPPT1/2/3)	25 A / 25 A / 25 A			
AC INPUT & OUTPUT (ON-GRID)				
Rated output power	8 kW	10 kW (AS4777 9999)	12 kW	15 kW (AS4777 9999)
Rated output current	11.6 A	14.5 A	17.4 A	21.8 A
Max. output apparent power	8800 VA	10000 VA (AS4777 9999)	13200 VA	16500 VA
Max. output continuous current	13.4 A	15.2 A	20.0 A	25.0 A
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V			
Max. AC input apparent power	16 kVA	20 kVA	20 kVA	20 kVA
Max. AC input current	25.8 A	32.0 A	32.0 A	32.0 A
Nominal AC frequency	50 Hz / 60 Hz			
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz			
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)			
THDi (rated power)	< 3%			
BATTERY				
Battery voltage range	160 ~ 800 V			
Communication interfaces	CAN / RS485			
BMS module	TBMS-MCS0800E			
Battery module	TP-HS50E			
Composition	TBMS-MCS0800E + TP-HS50E x n + Base Dimensions + Series Box（Required for two columns）			
Battery type	Li-ion (LFP)			
Nominal capacity / Nominal capacity④	5.1 kWh / 50 Ah			
Usable energy⑤	4.6 kWh			
Standard power	3 kW			
Max power	5.1 kW			
Max. charge / discharge current⑥	50 A			
Cycle life	> 6000 cycles			
Warranty	10 years			
Safety	CE, RCM, TUV (IEC62619), RoHS, REACH			
TBMS-MCS0800E dimensions (W x H x D) / Weight	730 × 165 × 150 mm / 9.3 kg			
TP-HS50E dimensions (W x H x D) / Weight	730 × 318 × 150 mm / 47 kg			
Base dimensions (W x H x D) / Weight	730 × 75 × 150 mm / 3.9 kg			
Series box dimensions (W x H x D) / Weight	167 × 91.5 × 121 mm / 1.3 kg			

	X3-IES-8K-P	X3-IES-10K-P	X3-IES-12K-P	X3-IES-15K-P
EPS (OFF-GRID) OUTPUT (WITH BATTERY)				
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz			
Rated EPS output power	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10 s			
Switchover time	< 10 ms			
EFFICIENCY				
Max. efficiency	98.0%			
European efficiency	97.7%			
ENVIRONMENT LIMIT				
Ingress protection	IP66			
Operating ambient temperature range⑦	-35 ~ 60°C			
Max. operating altitude	3000 m			
Relative humidity	0 ~ 100% RH (condensing)			
Overvoltage Category	Mains: Ⅲ, Battery: Ⅱ, PV: Ⅱ			
GENERAL				
Dimensions (W × H × D)	717 × 405 × 209.5 mm			
Net weight	40 kg			
Cooling concept	Nature cooling			
Communication interfaces	RS485, Pocket-X, CAN + RS485, DO, DI			
Power consumption (night)	< 40 W for hot standby, < 5 W for cold standby			
Topology	Non-isolated			
Certificates and approvals	IIEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G98 / G99 / AS4777 / EN50549 / CEI 0-21			
AC auxiliary power supply (APS)	Built-in			
PROTECTION				
Protections	Over voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current			
Active anti-islanding method	Frequency shift			
Surge protection (DC / AC)	DC: Type Ⅱ, AC: Type Ⅱ			
Arc-fault circuit interrupter (AFCI)	Optional			

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The AC frequency range may vary from different country codes
④ Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
⑤ System usable energy may vary with inverter different settings
⑥ Discharge: In case of the battery cell's temperature range of -20°C~10°Cand 45°C~53°C,the discharge current will be reduced; Charge: In case of the battery cell's temperature range of 0°C~25°C and 45°C~53°C, the charge current will be reduced. Product charge or discharge power depends on the actual temperature of the battery pack
⑦ Derating above +45°C

All-in-one Residential ESS

X-ESS G4

3-7.5 kW / 5-15 kW
3~12kWh

Smart Management

- Real-time monitoring via SolaXCloud
- Global MPP scan for optimal energy harvest
- Smart loads management (e.g. heat pump, smart EV charger)
- Intelligent ToU-driven energy management

Assured Reliability

- IP65 protection degree
- Support three-phase unbalance output

High Performance

- 200% PV oversizing and up to 110% AC output
- Max. 16A DC single string input current
- Max. 30A charging / discharging current

Flexible Adaptability

- All-in-one, plug-and-play design
- Quick installation by one person in 30 minutes
- Compatible with EV charger and heat pump

**Only applicable for three-phase model*

**V1.0.1 Information may be subject to modify without notice. 650.00078.00*

THE OPTIMAL SOLUTION FOR ENERGY STORAGE

The SolaX X-ESS G4 is an all-in-one smart energy storage system that combines an inverter, battery, and Matebox, streamlining installation for maximum ease and efficiency. The modular design offers flexible configurations, allowing the system to scale according to energy needs.

X-Hybrid G4

Available in single-phase (3–7.5 kW) and three-phase (5–15 kW) options, the X-Hybrid G4 system supports parallel operation of up to 10 inverters, delivering a maximum power output of 150 kW. It includes integrated fault management and emergency power output, with a rapid switching time of less than 10 ms for uninterrupted power.

Matebox

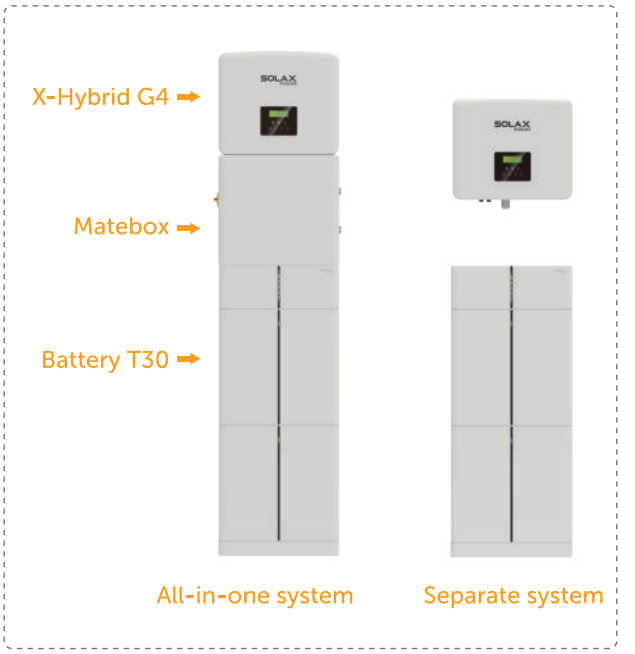
The Matebox comes with pre-installed components and cabling, significantly reducing installation time. For enhanced functionality, an advanced X3-Matebox version is available, providing whole-house backup power capabilities.

Battery T30

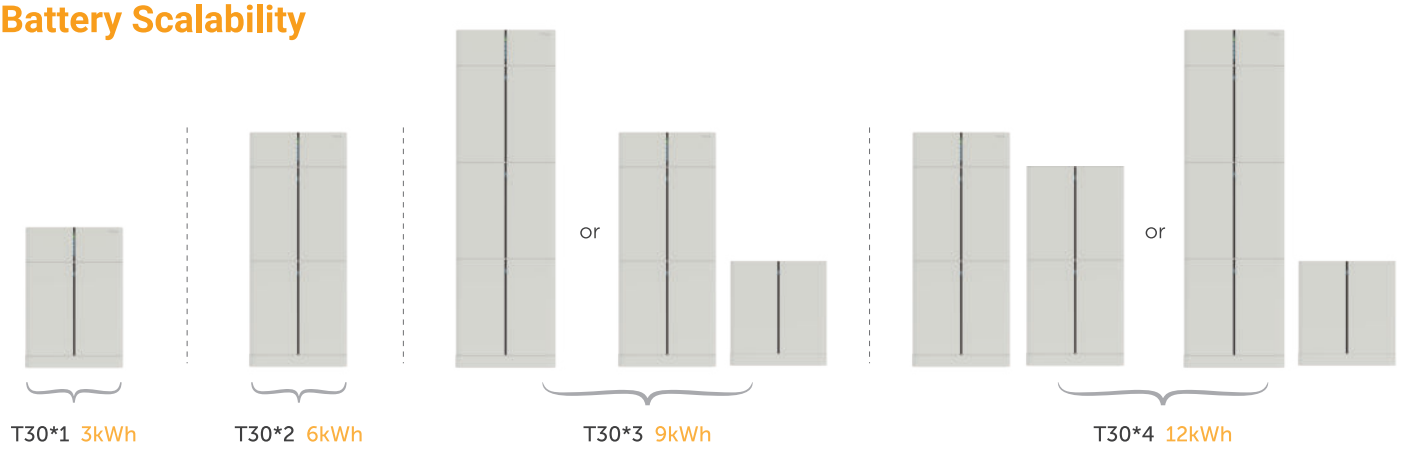
The T30 battery is scalable from 3 kWh to 12 kWh, adapting to different energy storage requirements. With built-in temperature control, it operates reliably within a wide temperature range of -30°C to 50°C, ensuring optimal performance in various environmental conditions.

SolaXCloud

Real-time monitoring and analytics with SolaXCloud: providing insights to optimize energy consumption and enhance overall system performance.



Battery Scalability



ENERGY STORAGE PRODUCTS

Commercial & Industrial Energy Storage Cabinet

Hybrid ESS Cabinet

ESS-AELIO

50kW / 60kW
100 / 143 / 200kWh

High Performance

- Max. 200% PV oversizing input
- Global MPP scan for optimal energy harvest
- Single cabinet with up to 200kWh, expandable to MWh-scale capacity

Assured Reliability

- Four-level fire safety protection
- IP66 for inverter, IP55 for cabinet
- Type II SPD on AC & DC side
- Smart IV curve scan for early panel diagnosis
- Optional AFCI protection
- Supporting three-phase unbalance output

Smart Management

- AI-driven intelligent algorithms for high SOC and accuracy
- VPP ready with SolaXCloud (IEEE 2030.5, OpenADR)
- Supporting micro-grids and diverse scenarios
- Smart schedule, smart scene and 7×24h TOU
- Wireless meter compatibility

Flexible Adaptability

- Supporting grid-connected and off-grid
- Expandable design with modular capacity options
- Max. 40A DC input current for high power solar panel

ENERGY STORAGE SYSTEM

	AELIO-P50B100	AELIO-P50B143	AELIO-P50B200	AELIO-P60B100	AELIO-P60B143	AELIO-P60B200
DC SIDE						
Max. recommended PV array power	100 kWp			120 kWp		
Max. PV input voltage①	1000 V					
Start-up voltage	180 V					
Rated PV input voltage	650 V					
MPPT voltage range②	160 ~ 950 V					
No. of MPP trackers / strings per MPP tracker	5 / 2			6 / 2		
Max. input current per MPPT	40 A					
Isc PV array short circuit current per MPPT③	50 A					
AC SIDE						
Rated output power	50.0 kW			60.0 kW		
Rated output current	75.8 A @ 220 V 72.5 A @ 230 V 69.5 A @ 240 V			91.0 A @ 220 V 87.0 A @ 230 V 83.4 A @ 240 V		
Max. apparent power	55.0 kVA			66.0 kVA		
Max. output continuous current	83.4 A @ 220 V 79.8 A @ 230 V 76.4 A @ 240 V			100.0 A @ 220 V 95.7 A @ 230 V 91.7 A @ 240 V		
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V					
Rated AC frequency	50 Hz / 60 Hz					
Adjustable power factor range	-1 ~ +1					
THDi (rated power)	< 3%					
BATTERY SIDE						
Battery type	LFP / 280 Ah					
Rated battery capacity	100 kWh	143 kWh	200 kWh	100 kWh	143 kWh	200 kWh
Rated battery voltage	358.4 V	512 V	716.8 V	358.4 V	512 V	716.8 V
Battery voltage range	296.8 ~ 408.8 V	424 ~ 584 V	596.3 ~ 817.6 V	296.8 ~ 408.8 V	424 ~ 584 V	596.3 ~ 817.6 V
Rated charge / discharge current	140 A					
GENERAL						
Dimensions (with inverter) (W × H × D)	1310×2300×1140mm	2070×2420×1200mm	2070×2420×1200mm	1310×2300×1140mm	2070×2420×1200mm	2070×2420×1200mm
Dimensions (without inverter) (W × H × D)	1020×2300×1150mm	1680×2420×1200mm	1680×2420×1200mm	1020×2300×1150mm	1680×2420×1200mm	1680×2420×1200mm
Weight (with inverter)	1600 kg	2344 kg	2800 kg	1600 kg	2344 kg	2800 kg
Weight (without inverter)	1500 kg	2244 kg	2700 kg	1500 kg	2244 kg	2700 kg
Operation temperature range	-30 ~ 55°C	-30 ~ 50°C	-30 ~ 50°C	-30 ~ 55°C	-30 ~ 50°C	-30 ~ 50°C
Relative humidity	0 ~ 100% RH (non-condensing)					
Max. operation altitude	3000 m					
Cooling concept	Smart air cooling					
Ingress protection	Cabinet: IP55; Inverter: IP66					
Fire protection	Aerosol / Water					
Topology	Non-isolated					
Certifications	IEC62619, IEC63056:2000, IEC61000, IEC62477-1, UN38.3					

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter
② Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ Isc current for single PV input string is 35A
* B143 is still under development

INVERTER

	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-61K
PV INPUT					
Max. recommended PV array power	100 kWp	120 kWp	100 kWp	120 kWp	
Max. PV input voltage①	1000 V				
Rated PV input voltage	650 V				
MPPT voltage range②	160 ~ 950 V				
Start-up voltage	180 V				
No. of MPP trackers / strings per MPP tracker	5 / 2	6 / 2	5 / 2	6 / 2	
Max. input current per MPPT	40 A				
Max. input short circuit current per MPPT	50 A				
AC INPUT & OUTPUT (ON-GRID)					
Rated output power	49.9 kW	49.9 kW	50.0 kW	60.0 kW	61.0 kW
Rated output current	75.7 A @ 220 V 72.4 A @ 230 V 69.4 A @ 240 V	75.7 A @ 220 V 72.4 A @ 230 V 69.4 A @ 240 V	75.8 A @ 220 V 72.5 A @ 230 V 69.5 A @ 240 V	91.0 A @ 220 V 87.0 A @ 230 V 83.4 A @ 240 V	92.5 A @ 220 V 88.5 A @ 230 V 84.8 A @ 240 V
Max. output apparent power	49.9 kVA	49.9 kVA	55.0 kVA	66.0 kVA	66.0 kVA
Max. output continuous current	75.7 A @ 220 V 72.4 A @ 230 V 69.4 A @ 240 V	75.7 A @ 220 V 72.4 A @ 230 V 69.4 A @ 240 V	83.4 A @ 220 V 79.8 A @ 230 V 76.4 A @ 240 V	100.0 A @ 220 V 95.7 A @ 230 V 91.7 A @ 240 V	100.0 A @ 220 V 95.7 A @ 230 V 91.7 A @ 240 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V				
Rated AC frequency	50 Hz / 60 Hz				
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz				
Adjustable power factor range	-1 ~ +1				
THDi (rated power)	< 3%				
BATTERY					
Battery type	LFP				
Battery voltage range	160 ~ 820 V				
Max. charge / discharge current	160 A (80 A × 2)				
EPS (OFF-GRID) OUTPUT					
Rated EPS output voltage, frequency	3 / N / PE, 220 / 380 V, 50 Hz / 60 Hz 3 / N / PE, 230 / 400 V, 50 Hz / 60 Hz 3 / N / PE, 240 / 415 V, 50 Hz / 60 Hz				
Rated EPS output power	49.9 kVA	49.9 kVA	50.0 kVA	60.0 kVA	61.0 kVA
Max. EPS output power	75 kVA, 10s	75 kVA, 10s	75 kVA, 10s	90 kVA, 10s	90 kVA, 10s
Switchover time	< 10 ms				
EFFICIENCY					
Max. efficiency	98.0%				
European efficiency	97.2%				
GENERAL					
Ingress protection	IP66				
Operating temperature range	-35 ~ 60°C (derating +45°C)				
Max. operation altitude	3000 m				
Relative humidity	0 ~ 100% RH (condensing)				
Overvoltage category	Mains: III, Battery: II, PV: II				

INVERTER

	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-61K
GENERAL					
Dimensions (W × H × D)	670 × 820 × 257 mm				
Net weight	< 100 kg	< 105 kg	< 100 kg	< 105 kg	< 105 kg
Cooling concept	Smart air cooling				
Communication interfaces	RS485-Meter, RS485-Monitor, RS485-Parallel (daisy-chain), CAN-BMS, CAN-Parallel (daisy-chain), USB, DI×2, DO×1, RCR (DI×4), DRM				
Topology	Non-isolated				
Certifications and approvals	CE, VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR				
PROTECTION					
Over / under voltage protection	Yes				
DC isolation protection	Yes				
DC reverse-polarity protection	Yes				
Grid monitoring	Yes				
DC injection monitoring	Yes				
Back feed current monitoring	Yes				
Residual current detection	Yes				
Over temperature protection	Yes				
Active anti-islanding method	Frequency shift				
Surge protection (DC / AC)	DC: Type II, AC: Type II				
Arc-fault circuit interrupter (AFCI)	Optional				
AC auxiliary power supply (APS)	Built-in				

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter
② Input voltage exceeding the MPPT voltage range may triggers inverter protection
③ The AC frequency range may vary from different country codes

BATTERY PACK

	TB-HR140
Battery type	LFP 280Ah
Battery capacity	14.3 kWh
Battery configuration	1P16S
Rated battery voltage	51.2 V
Battery voltage range	40 ~ 58.4 V
Weight	115 kg
Charge / discharge rate	≤ 0.5 C
Dimensions (W × H × D)	461 × 228 × 778 mm
Ingress protection	IP20

AC-coupled ESS Cabinet

ESS-TRENE (Air cooling)

100kW / 215kWh

High Performance

- High power density, compact design
- Scalable up to megawatt-hours
- Optimised space utilisation

Assured Reliability

- Four-level fire safety protection
- IP66 for inverter, IP55 for cabinet
- LFP battery cell & high-performance processors
- Type II SPD on AC side
- Advanced fault detection and response
- Supporting three-phase unbalance output

Smart Management

- Advanced energy management system
- VPP ready with SolaXCloud (IEEE 2030.5, OpenADR)
- Supporting micro-grids and diverse scenarios
- Smart schedule, smart scene and 7×24h TOU
- Wireless meter compatibility

Flexible Adaptability

- Supporting grid-connected and off-grid (with SolaX switching cabinet)
- Full-stack self-developed BMS, EMS, PCS & SolaXCloud
- One year of historical data storage

	TRENE-P100B215
AC SIDE (ON-GRID)	
Rated output power	100 kW
Max. output apparent power	110 kVA
Rated output current	151.9 A @380 V 144.4 A @400 V
Max. output continuous current	167.1 A @380 V 158.8 A @400 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
AC voltage range	340 ~ 460 V
Nominal AC frequency	50 Hz / 60 Hz
Adjustable power factor range	-1 ~ +1
Total harmonic distortion (THDi)	< 3% (rated power)
DC component	< 0.5% (rated power)
AC SIDE (OFF-GRID)	
Rated AC output voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
Rated AC frequency	50 Hz / 60 Hz
THDv (linear load)	< 3% (linear load)
Unbalance load capacity (off-grid)	100%
Overloading capability	110%，long term；120%，1min
Max. AC output continuous current	151.9 A @380 V 144.4 A @400 V
DC SIDE	
Battery type	LFP / 280 Ah
Battery capacity	215 kWh
Rated battery voltage	768 V
Battery voltage range	650 ~ 876 V
SYSTEM PARAMETER	
Dimensions (W x H x D)	1680 × 2420 × 1200 mm
Net weight	2800 kg
Operating temperature range	-30 ~ 50℃ (＞45℃ derating)
Relative humidity	0~95% RH (non-condensing)
Max. operating altitude	3000 m
Cooling concept	Smart air cooling
Ingress protection	IP55
Topology	Non-isolated
Standards	IEC62619, IEC63056, IEC61000, IEC62477-1, UN38.3, GB/T36276, GB/T34131
Communication interfaces	Ethernet
Communication protocol	Modbus TCP
Anti-corrosion degree	C4 (C5 optional)
Configuration of safety	Gas fire suppression + Water-based fire suppression + Ventilation
Max.Parallel quantity (off-grid)	10

PCS

	X3-TRENE-100K
AC SIDE (ON-GRID)	
Rated AC output apparent power	100 kW
Max. AC output apparent power	110 kVA
Rated AC output current	151.9 A @380 V 144.4 A @400 V
Max. AC output continuous current	167.1 A @380 V 158.8 A @400 V
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
AC voltage range	320 ~ 460V
Rated AC frequency	50 Hz / 60 Hz
AC frequency Range	50 ± 5 Hz / 60 ± 5 Hz
Adjustable power factor range	-1 ~ +1
Total harmonic distortion (THDi)	< 3% (rated power)
DC component	< 0.5% (rated power)
Unbalance load capacity (on-grid)	100%
AC SIDE(OFF-GRID)	
Rated AC output voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
Rated AC frequency	50 Hz / 60 Hz
THDv (linear load)	< 3% (linear load)
Unbalance load capacity (off-grid)	100%
Overloading capability	110%，long term；120%，1min
Max. AC output continuous current	167.1 A @380 V 158.8 A @400 V
DC SIDE	
Battery voltage range	650 ~ 936 V
Max. continuous charge / discharge current	161.8 A
GENERAL	
Max. Efficiency	98.0%
Ingress protection	IP66
Operating temperature range	-30 ~ 55°C (>45°C derating)
Max. operating altitude	3000 m
Relative humidity	0~95% RH (non-condensing)
Typical noise emission	< 75 dB (A)
Dimensions (W×H×D)	310 × 665 × 880 mm
Net weight	85 kg
Cooling concept	Smart air cooling
Communication interfaces	RS485 / CAN / Ethernet / DI

PCS

	X3-TRENE-100K
PROTECTION	
Protections	AC over / under voltage protection, DC component monitoring, AC input phase sequence error protection, Grid frequency high / low protection, Communication failure protection,Type II SPD on AC side,etc.
STANDARD	
Certifications	CE, EN50549, VDE4105, G99, AS4777, CEI 0-21, IEC61727, PEA / MEA, NRS-097-2-1, RD1699, TOR

PACK

	TB-HR140
Battery type	LFP 280 Ah
Battery capacity	14.3 kWh
Battery configuration	1P16S
Rated battery voltage	51.2 V
Battery voltage range	40 ~ 58.4 V
Weight	115 kg
Dimensions (W × H × D)	461 × 228 × 778 mm
Charge / discharge current	140 A
Max. operating altitude	3000 m
Ingress protection	IP20
Communication	CAN

AC-coupled ESS Liquid Cooling Cabinet

ESS-TRENE (Liquid cooling)

125kW /261kWh

High Performance

- Premium LFP battery with guaranteed quality
- High power density, compact design
- Scalable up to MWh
- Cell-level balancing and smart temperature control

Assured Safety

- 4 levels fire safety design secures minimal risk and loss
- Aerosol fire suppression for precise protection
- IP67 for battery, IP66 for inverter, IP55 for cabinet
- Advanced fault detection and response

Intelligent Design

- Advanced energy management system
- VPP ready with SolaXCloud (IEEE 2030.5, OpenADR)
- Supporting micro-grids and diverse scenarios
- Supporting remote monitoring and maintenance

Flexible Adaptability

- Supporting grid-connected and off-grid (with SolaX switching cabinet)
- Full-stack self-developed BMS, EMS, PCS & SolaXCloud
- One year of local historical data storage
- Optimised space utilisation

	TRENE-P124B261L-E	TRENE-P125B261L-E
AC SIDE (ON-GRID)		
Rated AC power	124.9 kW	125 kW
Max. output apparent power	124.9 kVA	125 kVA
Rated AC current	189.3 A @220 V 181.1 A @230 V	189.4 A @220 V 181.2 A @230 V
Max. output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
AC voltage range	340 ~ 440 V	
Rated AC frequency	50 Hz / 60 Hz	
Adjustable power factor range	-1 ~ +1	
THDi (rated power)	< 3%	
DC component	< 0.5% (rated power)	
AC SIDE (OFF-GRID)		
Rated AC output voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
Rated AC frequency	50 Hz / 60 Hz	
THDv (linear load)	< 3% (linear load)	
Unbalance load capacity (off-grid)	100%	
Overloading capacity	110%, long term; 120%, 1min	
Max. AC output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
DC SIDE		
Battery type	LFP / 314 Ah	
Battery capacity	261 kWh	
Rated battery voltage	832 V	
Battery voltage range	650 ~ 936 V	
SYSTEM PARAMETE		
Dimensions (W×H×D)	1350 × 2355 × 1350 mm	
Weight	2810 kg	
Operating temperature range	-35 ~ 55°C (>45°C derating)	
Relative humidity	0 ~ 100% RH	
Max. operation altitude	3000 m	
Cooling concept	Liquid cooling	
Ingress protection	IP55	
Topology	Non-isolated	
Standards	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, IEC 62933, UN 38.3, UL9540A	
Communication interface	Ethernet	
Communication protocol	Modbus TCP	
Anti-corrosion degree	C4 (C5 optional)	
Configuration of safety	Gas fire suppression + Water-based fire suppression + Ventilation + Explosion-proof plates	
Max. parallel quantity (off-grid)	10	

PCS

	X3-TRENE-124.9K	X3-TRENE-125K
	AC SIDE (ON-GRID)	
Rated AC output power	124.9 kW	125 kW
Max. AC output apparent power	124.9 kVA	125 kVA
Rated AC output current	189.3 A @220 V 181.1 A @230 V	189.4 A @220 V 181.2 A @230 V
Max. AC output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
AC voltage range	320 ~ 460 V	
Rated AC frequency	50 Hz / 60 Hz	
AC frequency range	50 ± 5 Hz / 60 ± 5 Hz	
Power factor range	-1~+1	
THDi (rated power)	< 3%	
DC component	< 0.5% (rated power)	
Unbalance load capacity (on-grid)	100%	
	AC SIDE(OFF-GRID)	
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
Rated AC frequency	50 Hz / 60 Hz	
THDv (linear load)	< 3% (linear load)	
Unbalance load capacity (off-grid)	100%	
Overloading capacity	110%, long term; 120%, 1min	
Max. AC output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
	DC SIDE	
Battery voltage range	650 ~ 936 V	
Max. charge / discharge current	202.1 A	202.3 A
	GENERAL	
Max. efficiency	98.0%	
Ingress protection	IP66	
Operating temperature range	-35 ~ 60°C （>45°C derating）	
Max. operation altitude	3000 m	
Relative humidity	0 ~ 100% RH	
Typical noise emission	< 75 dB	
Dimensions (W × H × D)	310 × 665 × 880 mm	
Weight	95 kg	
Cooling concept	Smart air cooling	
Communication interface	RS485, CAN, Ethernet, DI	

PCS

	X3-TRENE-124.9K	X3-TRENE-125K
PROTECTION		
Protections	AC over / under voltage protection, DC component monitoring, AC input phase sequence error protection, Grid frequency high / low protection, Communication failure protection,Type II SPD on AC side,etc.	
STANDARD		
Certifications	CE, EN50549, VDE4105, G99, AS4777, CEI 0-21, IEC61727, PEA / MEA, NRS-097-2-1, RD1699, TOR	

PACK

	TB-HR522
Battery type	LFP 314 Ah
Battery capacity	52.2 kWh
Battery configuration	1P52S
Rated battery voltage	166.4 V
Battery voltage range	130 ~ 187.2 V
Weight	330 kg
Dimensions (W × H × D)	790 × 250 × 1140 mm
Charge / Discharge current	157 A
Relative humidity	0 ~ 95% RH (non-condensing)
Max. operating altitude	3000 m
Ingress protection	IP67
Communication	CAN

If there is any change in product size and parameters, please refer to the latest information without prior notice。

ENERGY STORAGE PRODUCTS

Smart EV Charger

EV Charger

SMART EV CHARGER

X1-EVC

7.2kW

X3-EVC

11kW / 22kW

High Efficiency

- Capable of 100% green energy
- Maximizes surplus green energy utilization in a zero-export system

Assured Safety

- Current leakage protection (30mA AC & 6mA DC)
- Smart dynamic load balance control

Intelligent Design

- Smart RFID management function
- Smart APP remote control

Flexible Adaptability

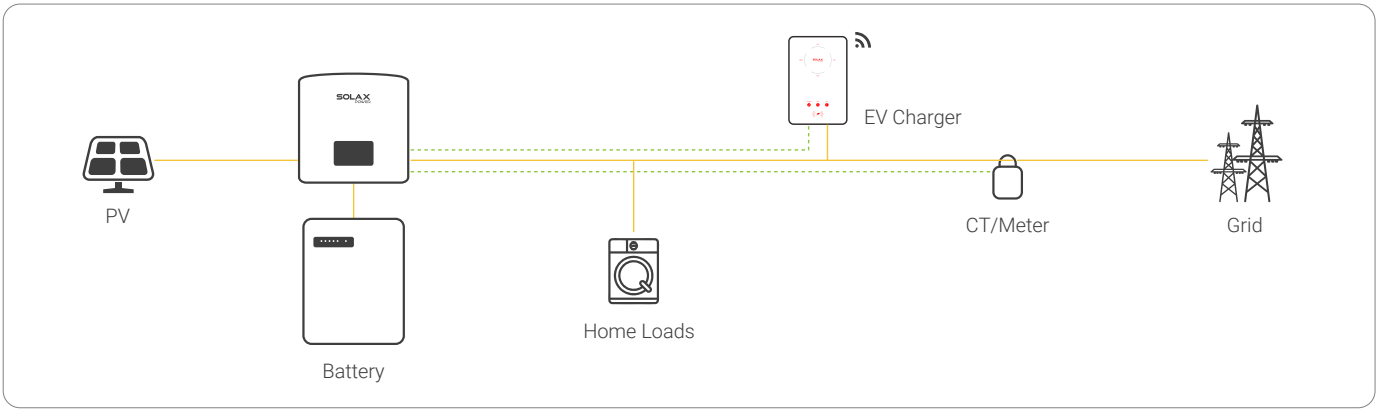
- Selectable plug or socket outlet
- Easy indoor and outdoor installation

V1.3. Information may be subject to modify without notice. 650.00043.00

	X1-EVC-7.2K	X3-EVC-11K	X3-EVC-22K
AC NOMINAL INPUT			
Phases/Lines	Single phase	Three phase	Three phase
Voltage	1 / N / PE, 230 V	3 / N / PE, 230 / 400 V	3/N/PE, 230 / 400 V
Frequency	50 ± 5 Hz / 60 ± 5 Hz	50 ± 5 Hz / 60 ± 5 Hz	50 ± 5 Hz / 60 ± 5 Hz
AC NOMINAL OUTPUT			
Voltage	1 / N / PE, 230 V	3 / N / PE, 230 / 400 V	3 / N / PE, 230 / 400 V
Current	32 A	16 A	32 A
Power	7.2 kW	11 kW	22 kW
INTERFACE			
Wireless module	Wi-Fi 2.4GHz		
Ethernet	10 / 100 M		
RS485	Yes		
RFID	Yes		
OCPP 1.6 (JSON)	Yes		
LCD screen	Optional		
CT clamps	X1	X3	X3
GENERAL DATA			
Housing material	Plastic / Metal		
Installation method	Wall-mount / Pedestal-mount (Optional)		
Wall-mount bracket	Yes		
Charging outlet	Type P (Charging cable with plug) / Type S (Socket-outlet)		
Cable length	6.5 m (Type P)		
Operating temperature	-30 ~ 50°C		
Working humidity	5 ~ 95% RH (non-condensing)		
Working altitude	＜2000 m		
Degree of protection	IP65		
Impact resistant	IK10 (Housing) / IK08 (LCD screen)		
Application site	Indoor / Outdoor		
Cooling concept	Natural cooling		
Dimension (W × H × D)	249 × 370 × 155 mm (for type S) / 265 × 370 × 155 mm (for type P)		
Net weight	7 kg (for type S) / 10.5 kg (for type P)		
PROTECTION			
Multiple protection	Over/Under voltage protection, Overload protection, Shortcircuit protection, Current leakage protection, Grounding protection, Surge protection, Overtemperature protection		
Integral earth leakage protection	Integrated current failure monitoring (30mA AC & 6mA DC)		
Built-in pen fault technology①	According to BS 7671:2018 requirements		
Safety standard	IEC 61851-1:2017, IEC 62196-2:2016		
Encrypted communication	TLS		
Certification	CE, UKCA, LVD, EMC, RED		

① Only for chargers sold in the UK region

Solution



EV Charger

Smart EV Charger G2

X1-HAC-4 / X1-HAC-7
X3-HAC-11 / X3-HAC-22

High Efficiency

- Capable of 100% green energy
- Automatic switch between single and three phases
- Maximizing surplus green energy utilization in a zero-export system

Assured Safety

- Current leakage protection (30mA AC & 6mA DC)
- Smart dynamic load balance control

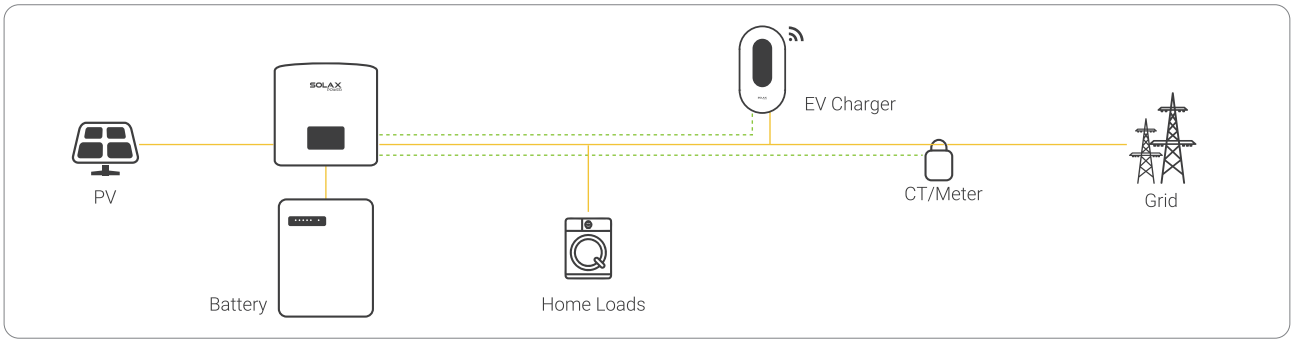
Intelligent Design

- Smart RFID management function
- Smart APP remote control

Flexible Adaptability

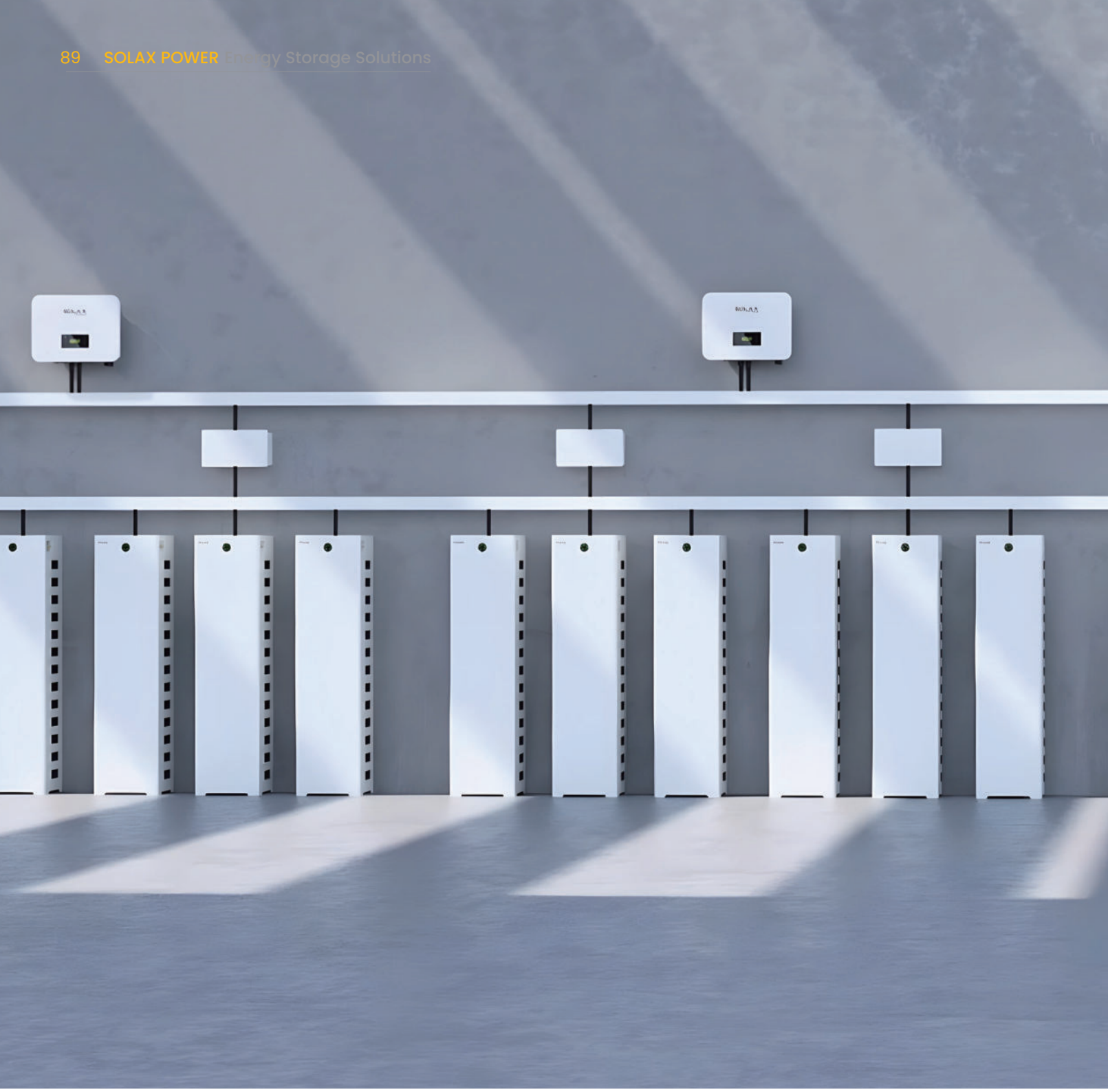
- Selectable plug or socket outlet
- Easy indoor and outdoor installation
- Supporting multiple communication protocols

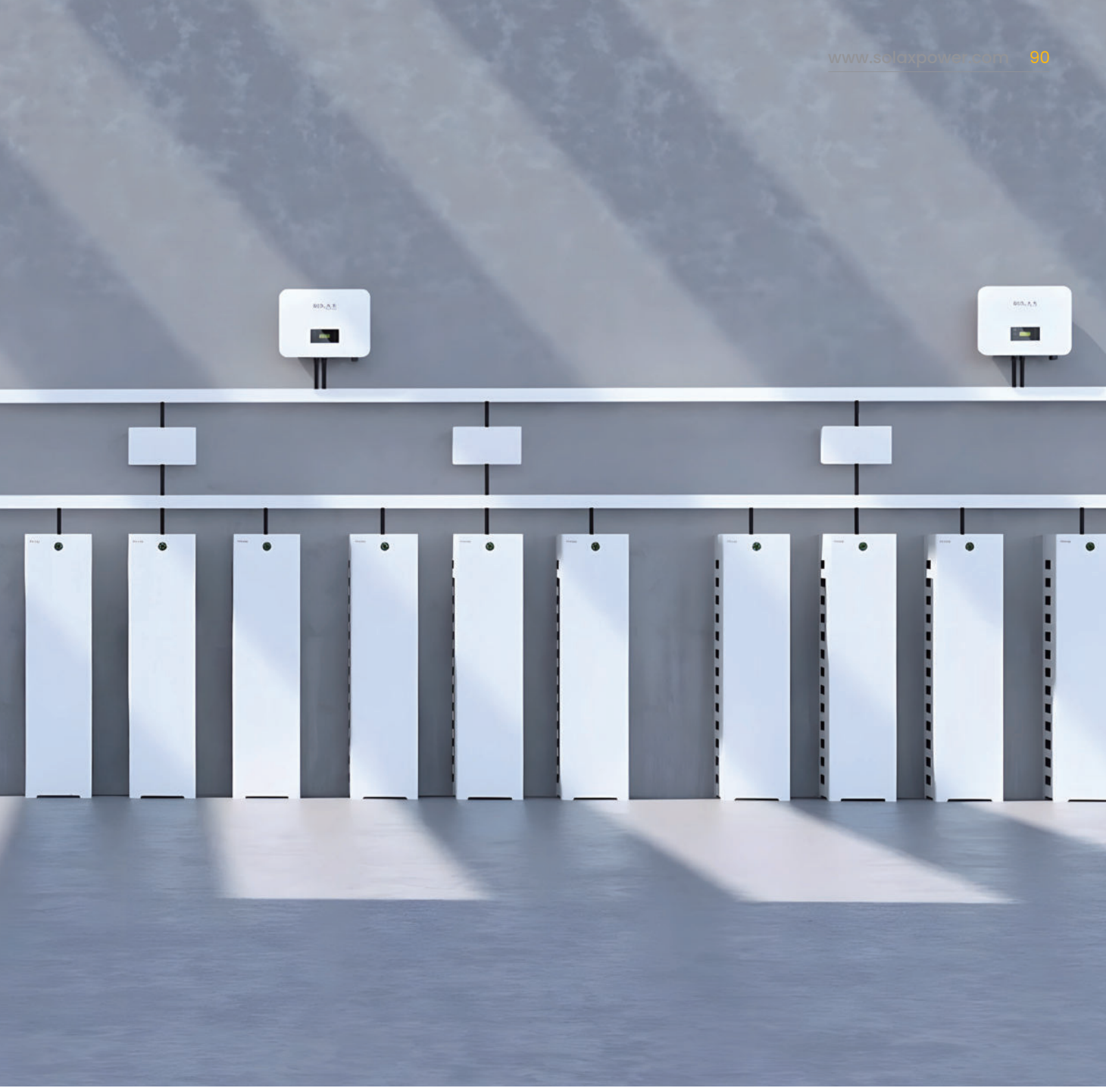
Solutions



	X1-HAC-4	X1-HAC-7	X3-HAC-11	X3-HAC-22
AC NOMINAL INPUT				
Voltage	230 V	230 V	400 V	400 V
Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz
Grounding type	TN, TT, IT	TN, TT, IT	TN, TT, IT	TN, TT, IT
AC NOMINAL OUTPUT				
Voltage	230 V	230 V	400 V	400 V
Current	6-20 A (single phase)	6-32 A (single phase)	6-16 A (single phase or three phases)	6-32 A (single phase or three phases)
Power	1.4 ~ 4.6 kW	1.4 ~ 7.2 kW	1.4 ~ 11 kW	1.4 ~ 22 kW
INTERFACE & COMMUNICATION				
Communication interface	Wi-Fi / Ethernet / 4G (optional) / RS 485 × 2			
Protocol	OCPP 1.6j, Modbus TCP, Modbus RTU, Cloud API			
Communication	IEC 61851-1, ISO 15118 (optional)			
Authentication	Plug & Charge / RFID (ISO-14443-A) / APP			
MID meter	External (optional)			
HMI	RGB LED / APP / LCD (optional)			
Remote control	APP & Web			
Application	Residential / Destination place / Public			
GENERAL DATA				
Housing material	PC			
Installation method	Wall / Pedestal (optional)			
Charging outlet	Type2 plug / Type2 socket (IEC 62196)			
Cable length	6.5 m (Type P)			
Operation temperature	-30 ~ 50°C			
Storage temperature	-40 ~ 60°C			
Operation humidity	5% ~ 95% RH (non-condensing)			
Max. operation altitude	2000 m			
Degree of protection	IP65 (plug type) / IP54 (socket type) IK10 (housing) / IK08 (screen)			
Cooling method	Nature cooling			
Application site	Indoor / Outdoor			
Weight	5 kg for plug type	3 kg for socket type 5 kg for plug type	3 kg for socket type 6.5 kg for plug type	3 kg for socket type 6.5 kg for plug type
Dimension (W × H × D)	206 × 390 × 139 mm			
PROTECTION				
Multiple protection	Over/Under voltage protection, Overload protection, Shortcircuit protection, Current leakage protection, Grounding protection, Surge protection, Overtemperature protection			
Theft protection	Support theft protection with a padlock			
Integral earth leakage protection	Integrated current failure monitoring (30 mA AC & 6 mA DC)			
Cable protection	Cable lock (APP control)			
Relay protection	Relay weld detection			
Built-in PEN fault technology	According to BS 7671:2018 requirements①			
Standards	IEC 61851-1:2017, IEC 62196-2:2016			

① Only for chargers sold in the UK region

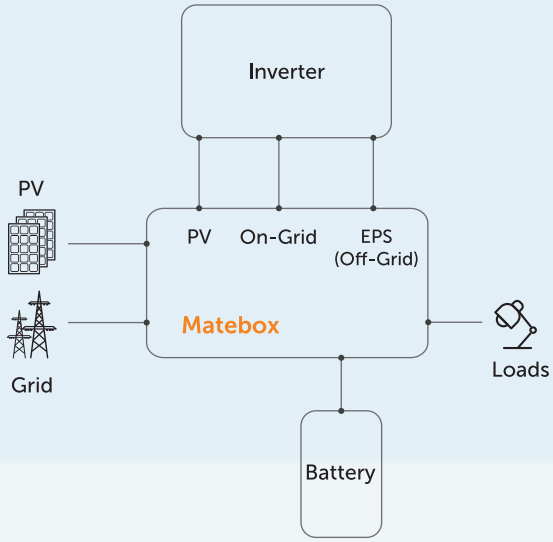




ENERGY STORAGE PRODUCTS

Accessories

Accessories



MATEBOX

In the X-ESS G4 system, we have eliminated the complicated wiring work by pre - routing all the cables inside the Matebox. The installation process is straightforward and only involves two steps: firstly, stack one module on top of another in a vertical arrangement; secondly, connect the cables that have already been neatly organized within the Matebox to their corresponding ports.

X1-MATEBOX

X1-MATEBOX	
PV	
Max. input voltage	600 Vdc
Max. short circuit current (A / B)	20 / 20 A
BATTERY	
Battery voltage range	80 ~ 480 V
Max. charge / discharge current	30 A
ON-GRID (INVERTER)	
Rated voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max. on-grid current	32.6 A
OFF-GRID (INVERTER)	
Rated voltage, frequency	230 Vac, 50 / 60 Hz
Rated current	32.6 A
GRID (UTILITY)	
Rated grid voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max. input current	60 A
LOAD	
Rated voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max. current	60 A
ENVIRONMENT LIMIT	
Ingress protection	IP54
Protection class	Class I
Operation temperature range	-35 ~ 60°C
Storage temperature	-40 ~ 70°C
Relative humidity	0 ~ 100% (condensing)
Max. operation altitude	< 3000 m
Overvoltage category	III (AC), II (DC)
OTHER	
Cooling concept	Nature cooling
DIMENSION AND WEIGHT	
Dimensions (W × H × D)	482 × 437 × 185 mm
Net weight	10.5 kg

X3-MATEBOX BASIC

X3-MATEBOX BASIC

PV	
Max. input voltage	1000 Vdc
Max. short circuit current (A / B)	30 / 20 A
BATTERY	
Battery voltage range	180 ~ 500 V
Max. charge / discharge current	30 A
ON-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. Grid (INV) input / output current	32 / 32 A
OFF-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	24.1 A
GRID (UTILITY)	
Rated grid voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. input / output current	32 / 32 A
LOAD	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	24.1 A
ENVIRONMENT LIMIT	
Ingress protection	IP54
Protection class	Class I
Operation temperature range	-35 ~ 60°C
Storage temperature	-40 ~ 70°C
Relative humidity	0 ~ 100%
Max. operation altitude	< 3000 m
Overvoltage category	III(AC), II(DC)
OTHER	
Cooling concept	Nature cooling
DIMENSION AND WEIGHT	
Dimensions (W × H × D)	533 × 397 × 204 mm
Net weight	7.5 kg

X3-MATEBOX ADVANCED

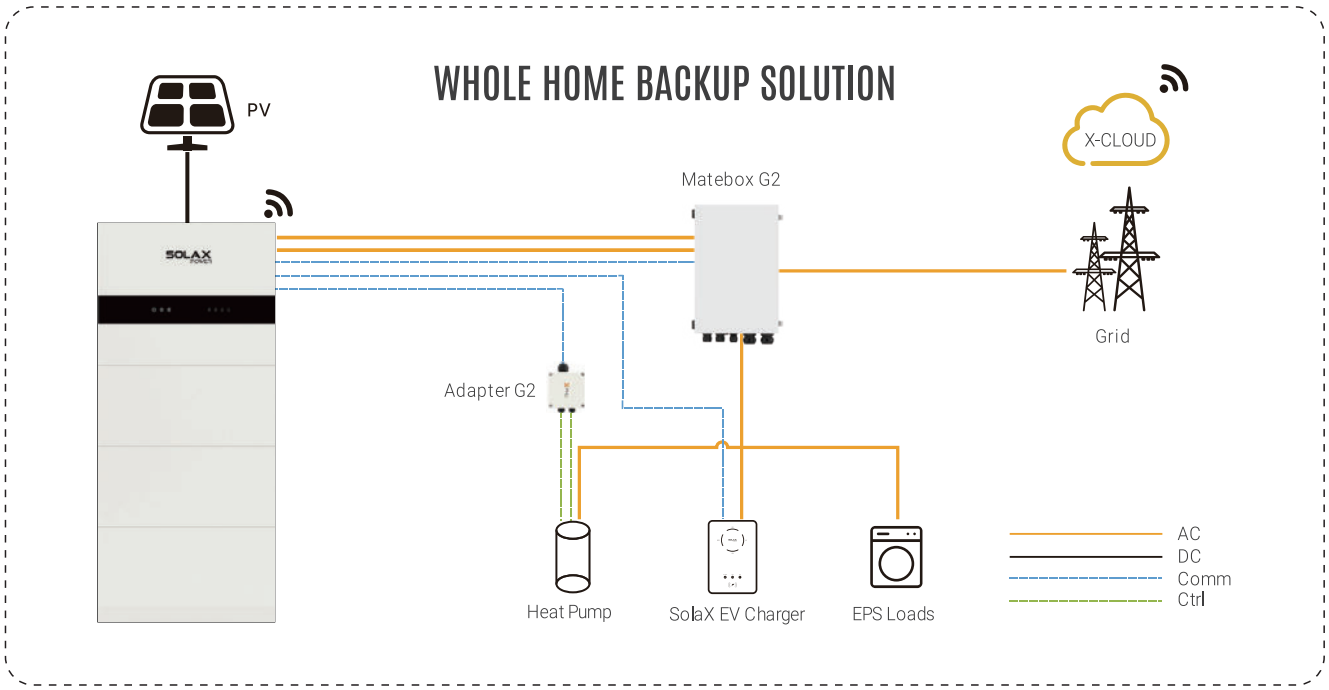
X3-MATEBOX ADVANCED

PV	
Max. input voltage	1000 Vdc
Max. short circuit current (A / B)	30 / 20 A
BATTERY	
Battery voltage range	180 ~ 500 V
Max. charge / discharge current	30 A
ON-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. Grid (INV) input/output current	24.1 / 24.1 A
OFF-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	24.1 A
GRID (UTILITY)	
Rated grid voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. input / output current	63 / 24.1 A
LOAD	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	63 A
ENVIRONMENT LIMIT	
Ingress protection	IP54
Protection class	Class I
Operation temperature range	-35 ~ 60°C
Storage temperature	-40 ~ 70°C
Relative humidity	0 ~ 100%
Max. operation altitude	< 3000 m
Overvoltage category	III (AC), II (DC)
OTHER	
Cooling concept	Nature cooling
DIMENSION AND WEIGHT	
Dimensions (W × H × D)	551 × 512 × 204 mm
Net weight	14.5 kg

Accessories

X1-Matebox G2

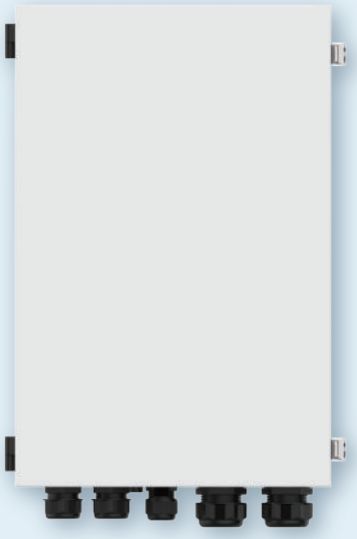
We get rid of complicated wiring work by laying all the wires in the Matebox. All you need to do is just to connect all the cables which are already well-sorted in the Matebox. This helps to save time and money.



X1-Matebox G2

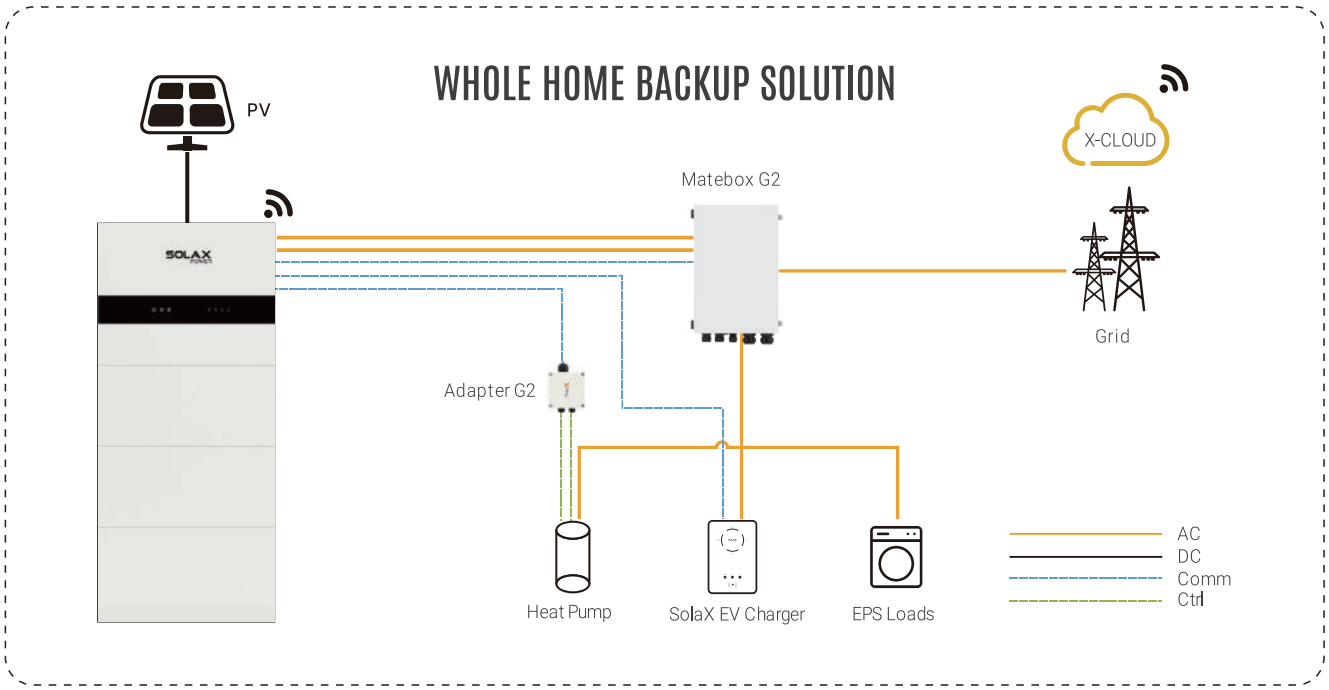
ON-GRID (INVERTER)	
Rated voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max.apparent on-grid input/output power	8000 VA
Max. on-grid current	40 A
OFF-GRID (INVERTER)	
Rated voltage, frequency	230 Vac, 50 / 60 Hz
Max.apparent off-grid input/output power	8000 VA
Max. off-grid current	40 A
GRID (UTILITY)	
Rated grid voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max. current	63 A (100 A for England)
LOAD	
Rated voltage, frequency	220 / 230 / 240 Vac, 50 / 60 Hz
Max. current	63 A (100 A for England)
ENVIRONMENT LIMIT	
Ingress protection	IP65
Protection class	Class I
Operation temperature range	-25 ~ 60°C (> 45°C derating)
Storage temperature	-40 ~ 70°C
Relative humidity	0 ~ 100% RH (condensing)
Max. operation altitude	3000 m
Overvoltage category	III (AC)
OTHER	
Cooling concept	Natural cooling
DIMENSION AND WEIGHT	
Dimensions(WxHxD)	549 × 360 × 192 mm
Net weight	11 kg

Accessories



X3-Matebox G2

We get rid of complicated wiring work by laying all the wires in the Matebox. All you need to do is just to connect all the cables which are already well-sorted in the Matebox. This helps to save time and money.



X3-Matebox G2

ON-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max.apparent on-grid input/output power	16500 VA
Max. on-grid current	32 A
OFF-GRID (INVERTER)	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max.apparent off-grid input/output power	15000 VA
Max. off-grid current	25 A
GRID (UTILITY)	
Rated grid voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	63 A
LOAD	
Rated voltage, frequency	380 / 400 / 415 Vac, 50 / 60 Hz
Max. current	63 A
ENVIRONMENT LIMIT	
Ingress protection	IP65
Protection class	Class I
Operation temperature range	-25 ~ 60°C (> 45°C derating)
Storage temperature	-40~+70°C
Relative humidity	0~100
Max. operation altitude	3000
Overvoltage category	III(AC)
OTHER	
Cooling concept	Natual cooling
DIMENSION AND WEIGHT	
Dimensions(WxHxD)	549 × 360 × 192 mm
Net weight	13.5 kg

Accessories

X3-EPS Parallel Box G2

60kW

150kW

300kW

Flexible Integration

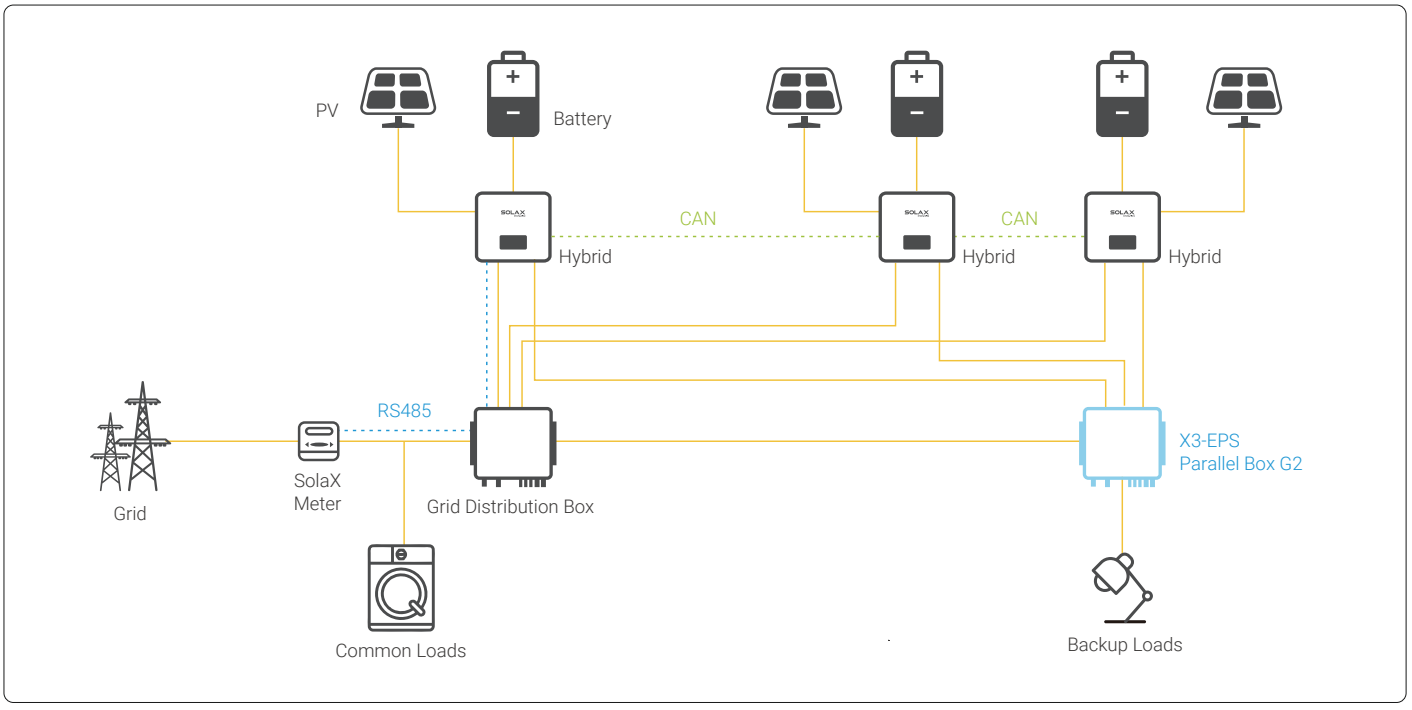
- Convenient wiring

Reliable Performance

- Provide reliable backup power in parallel

	X3-PBOX-60kW-G2	X3-PBOX-150kW-G2①	X3-PBOX-300kW-G2
GRID (INVERTER)			
Grid connection	Three Phase		
Ratedvoltage	220 / 380 V, 230 / 400 V, 240 / 415 V		
AC frequency	50 Hz / 60 Hz		
AC output voltage range	(198 ~ 253 V) / (342 ~ 440 V)		
Maximum grid input current	87 A	217 A	478 A
EPS (INVERTER)			
Rated voltage	230 VA / 400 VA		
EPS frequency	50 Hz / 60 Hz		
Maximum No. of parallel inverters②	6	10	10
Maximum EPS input current per channel	21.7 A	43.5 A	95.6 A
Maximum EPS input current	87 A	217 A	478 A
LOAD (BACKUP)			
Load connection	Single Phase / Three Phase		
Rated voltage	220 / 380 V, 230 / 400 V, 240 / 415 V		
AC frequency	50 Hz / 60 Hz		
Maximum apparent power	60 kVA	150 kVA	300 kVA
Maximum output current	87 A	217 A	478 A
Switchover time	< 10 s		
GENERAL SPECIFICATION			
Operating temperature range	-25 ~ 40°C (-13 ~ 104°F)		
Relative humidity range	0 ~ 100% RH (condensing)		
Altitude	< 3000 m		
Dimensions (W × H × D)	492 × 478 × 183 mm	776 × 740 × 234 mm	880 × 1080 × 270 mm
Weight	17 kg	42.5 kg	100 kg
Degree of protection	IP65		

① This model comes in two versions: G2 and G2.1. The G2 version supports only X3-G4 and does not support X3-ULTRA, whereas the G2.1 version is compatible with both X3-G4 and X3-ULTRA
② This is related to the maximum power of X3-EPS Parallel Box and the maximum output power of the inverter. Taking X3-PBOX-300kW-G2 as an example, if the maximum output power of the connected inverter is 50kW, the maximum number of parallel machines is 6. If the maximum output power of the connected inverter is 30kW, the maximum number of parallel machines is 10



Accessories

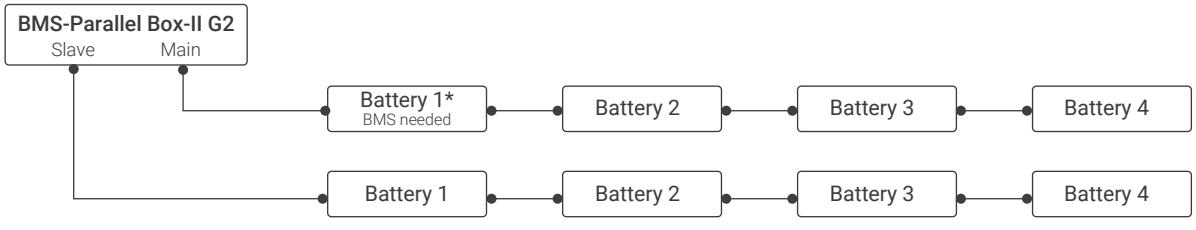
BMS-Parallel Box-II G2

Reliable Performance

- Easily expand Capacity
- Extend battery lifespan

Flexible Adaptability

- Support two-column parallel connection
- Support T-BAT-SYS-HV-3.0, T-BAT-SYS-HV-5.8



Notes:
1. Battery 1 & 2 & 3 & 4 may refer to HV11550 or HV10230.
2. Battery 1 & 2 & 3 & 4 models are required to be the same
3. As for Battery 1*, a BMS is necessory, that is, T-BAT H 5.8 for T58, MC0600 + HV10230 for T30

BMS-PARALLEL BOX-II G2

ENVIRONMENT REQUIREMENT				
Input / Output voltage range	70 ~ 550 V			
Standard power	11.5 kW			
Maximum power	16.1 kW			
Operating charge / discharge temperature range①	T-BAT-H 3.0: -30 ~ 55°C (with heating function) -10 ~ 55°C (no heating function) T-BAT H 5.8: 0 ~ 55 °C (no heating function)			
Storage temperature②	-30 ~ 80°C			
Relative humidity	5 ~ 95% (non-condensing)			
Altitude	3000 m			
Protection	IP65			
COMMUNICATION				
System to inverter	CAN + RS485			
Battery to battery / BMS	T30: CAN / T58: RS485			
Master control LED indicator working mode	1 LED			
Master control capacity indicator	2 x 4 LED (25%, 50%, 75%, 100%)			
Battery module LED	2 LED			
Switch on / off	Button x 1 + breaker x 1			
CERTIFICATION				
Safety	IEC / EN 62477-1, IEC / EN 61439-1, IEC / EN 61439-2			
EMC	EN 61000-6-1 / 2 / 3 /4			
GENERAL				
Dimensions (W x H x D)	368 x 334 x 153.5 mm			
Weight	8.7 kg			
Expected life	5 years			
NOMINAL CHARACTER (BATTERY SYSTEM)				
Overvoltage category (OVC)	II			
Protective class	I			
Recommend charge / discharge current	25 A			
Max. charge / discharge current	35 A			
SYSTEM ONE (T58 PACK)				
	TP 5.8 G2	**TP 5.8 G2**	**TP 5.8 G2**	**TP 5.8 G2**
Nominal voltage	115.2 V	230.4 V	345.6 V	460.8 V
Operating voltage	100 ~ 131 V	200 ~ 262 V	300 ~ 393 V	400 ~ 524 V
Total capacity	11.5 kWh	23 kWh	34.6 kWh	46.1 kWh
Usable capacity③	10.3 kWh	20.7 kWh	31.1 kWh	41.4 kWh
Nominal power	2.8 kW	5.7 kW	8.6 kW	11.5 kW
Max. power④	4.0 kW	8.0 kW	12.0 kW	16.1 kW
SYSTEM TWO (T30 PACK)				
	TP 3.0 G2	**TP 6.0 G2**	**TP 9.0 G2**	**TP 12.0 G2**
Nominal voltage	102.4 V	204.8 V	307.2 V	409.6 V
Operating voltage	90 ~ 116 V	180 ~ 232 V	270 ~ 348 V	360 ~ 464 V
Total capacity	6.1 kWh	12.3 kWh	18.4 kWh	24.6 kWh
Usable capacity③	5.5 kWh	11.0 kWh	16.5 kWh	22.1 kWh
Nominal power	2.5 kW	5.1 kW	7.6 kW	10.2 kW
Max. power④	3.0 kW	6.1 kW	9.2 kW	12.2 kW

① BMS parallel box G2 with different batteries has different system operating temperature
② This is the storage temperature of BMS parallel box G2, please refer to the battery storage problem for each battery
③ 90% DOD; System usable energy may vary with inverter different setting
④ Test conditions: 100% DOD, 0.2C charge & discharge @+25°C

Accessories

TCBox-70

Reliable Performance

- Easy capacity expansion and extend battery lifespan
- Scalable, modular design

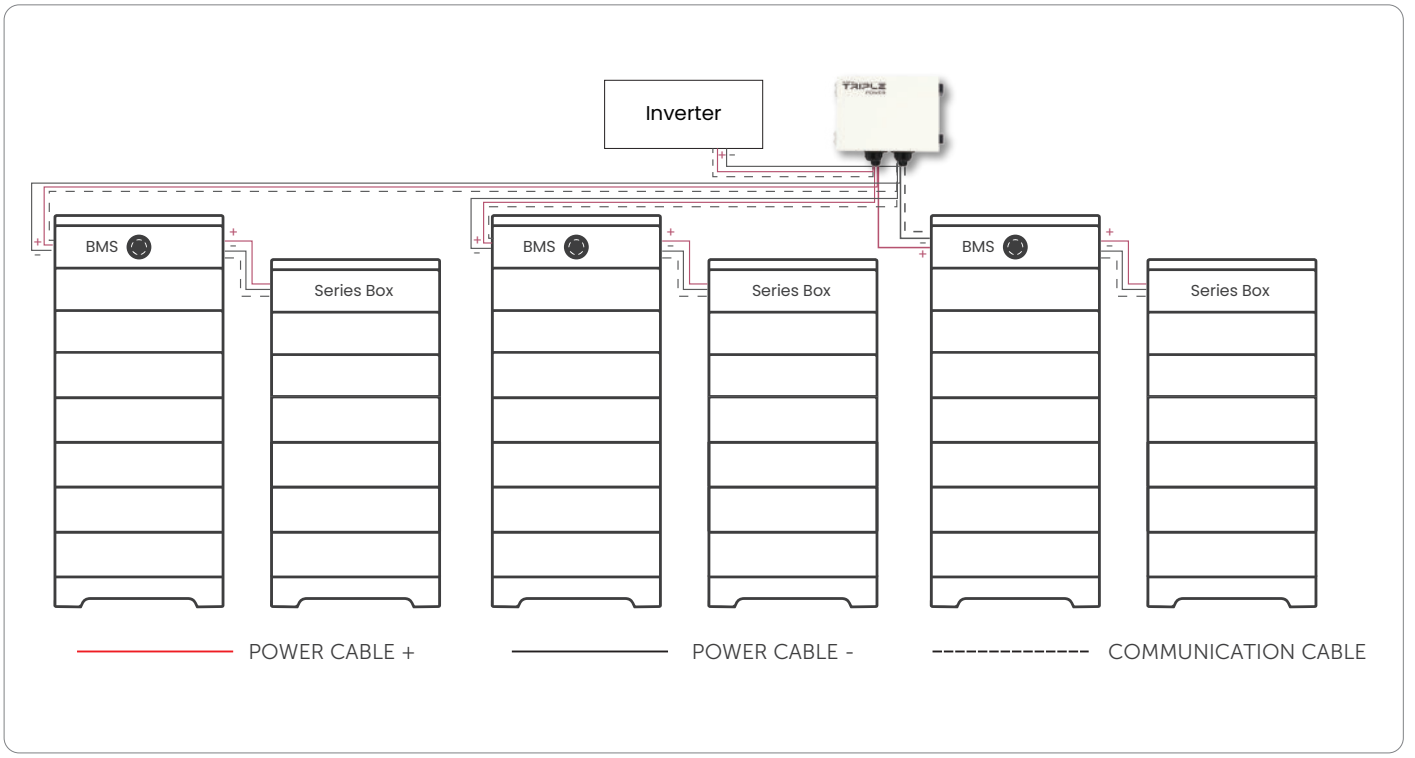
Flexible Adaptability

- Support three-column parallel connection
- Support T-BAT-SYS-HV-S2.5, T-BAT-SYS-HV-S3.6, T-BAT-SYS-HVS50E-D, TSYS-HS51*

** Compatibility with TSYS-HS51 will be upgraded in the future*

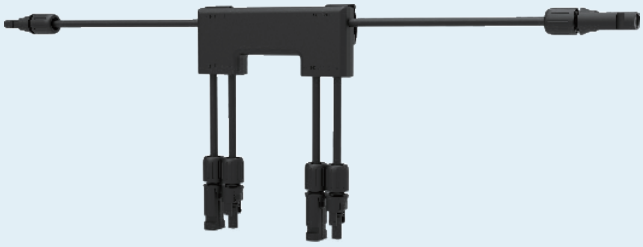
TCBOX-70

Max. operation current	70 A
Input & output voltage	90 ~ 750 V
Communication interface	RJ45 × 4
Max. parallel tower	3
Available charge / discharge temperature range	-30 ~ 60 °C
Storage temperature	-40 ~ 80 °C
Relative humidity	0 ~ 95 %
Dimension (W x H x D)	325 × 231 × 126 mm
Weight	2.1 kg
Installation type	Wall mounted
Protection class	IP65
Cooling type	Natural
Altitude	< 3000 m



Rapid Shutdown Device

XRSD-1C



XRSD-2C

Prioritizing safety and rapid shutdown capabilities, the XRSD series offers a sophisticated module-level solution that guarantees the smooth functioning of both new and existing PV systems. Once activated by the SolaX Transmitter—XRSD-Core Kit, the XRSD modules ensure your connected PV system remains operational.

In case of emergencies, you have multiple shutdown options: either remotely control each individual panel through the SolaX cloud, toggle the AC breaker on the Transmitter, or engage the E-STOP button. This versatility makes the XRSD system a reliable safety measure for quick deactivation of your PV system as needed.

Note: To achieve rapid shutdown, please use with the TRANSMITTER KIT (Model: XRSD-CORE KIT).

High Efficiency

- Max. 20A PV input current
- Lower power consumption & wider operating voltage

Assured Safety

- Module-level rapid shutdown
- IP68 with unrivaled reliability

Intelligent Design

- Faster installation with plug-and-play cables and connectors
- Ultra-low signal noise, enhancing system stability

Flexible Adaptability

- Compatible with all SolaX inverters and other major inverter brands*
- Compatible with mainstream PV panels

**Compatibility testing required*

**V1.3.1 Information may be subject to modify without notice.650.00050.00*
**V1.4.1 Information may be subject to modify without notice.650.00051.00*

	XRSD-1C	XRSD-2C
ELECTRICAL DATA		
Input voltage range	8 ~ 80 V	
Output voltage range	8 ~ 80 V	16 ~ 160 V
Max. PV input current	20 A	
Max. short circuit current	26 A	
Recommended fuse rating	30 A	
Maximum system voltage	1500 V	
MECHANICAL		
Dimensions (without cables and connectors)	130 × 36 × 21 mm	135 × 59 × 20 mm
Weight	400 g	720 g
Input connectors	MC4 (Standard)	MC4 (Standard)
Input cable length	0.2 m	0.45 m
Output connectors	MC4 (Standard)	MC4 (Standard)
Output cable length	1.2 m	2.4 m
Communication type	PLC	
ENVIRONMENT LIMIT		
Protection class	IP68 / NEMA6P	
Operating temperature range	-40 ~ 85°C	
COMPLIANCE		
Safety	EN 62109-1:2010	
EMC	EN IEC 61000-6-1 / 2 / 3 / 4; EN IEC 61000-3-2 / 3 / 11 / 12; EN 55011	

Rapid Shutdown Device

XRSD-CORE KIT

The Solax XRSD-Core Kit, in tandem with Rapid Shutdown Devices, forms a crucial segment of the Solax rapid shutdown system. Here's how it functions:

- Once activated, it continuously sends a keep-alive signal to the XRSD, ensuring a stable connection between the PV modules and the string inverter.
- In the event of a power down in the XRSD-Core Kit, the XRSD swiftly transitions to a quick shutdown mode, temporarily suspending energy generation.
- Upon restoring power to the XRSD-Core Kit, energy production resumes seamlessly and without delay.

Note: To achieve rapid shutdown, please use with the Rapid Shutdown Device. (You can choose from models of XRSD-1C or XRSD-2C)

IP65 protection degree

Supports up to 2 cores per transmitter

Seamlessly compatible with SolaX XRSD receivers for module-level rapid shutdown

XRSD-CORE KIT

ELECTRICAL DATA	
Power supply input voltage	85 ~ 264 VAC
Transmitter input voltage	12 (±2%) V
Transmitter input current	1 A
CORE	
Max. number of configure core	2
Max. current per core	150 A
Max. string voltage	1500 V
Diameter	~31 mm (inner) / 65 mm (outer)
Max. number of strings per core*	10 (This data refers to a cable diameter of Φ 6 mm)
MECHANICAL	
Dimensions	200 × 300 × 170 mm
ENVIRONMENT LIMIT	
Protection class	IP65 / NEMA4
Operating temperature range	-40 ~ 75°C
COMPLIANCE	
Safety	EN 62109-1:2010
EMC	EN IEC 61000-6- 1 / 2 / 3 / 4; EN IEC 61000-3-2 / 3 / 11 / 12; EN 55011

* Note: According to the cable diameter Φ 6 mm, if cable diameter is more than Φ 6 mm, Strings Per Core will be reduced. Extra precaution must be taken to avoid exceeding the permissible current limit.

Accessories

ADAPTER BOX G2

High Efficiency

- Maximizing surplus green energy utilization
- Supports multiple types of loads

Assured Safety

- Inverter disconnection protection
- TLS communication protection

Intelligent Design

- Wi-Fi network connection
- Smart APP control

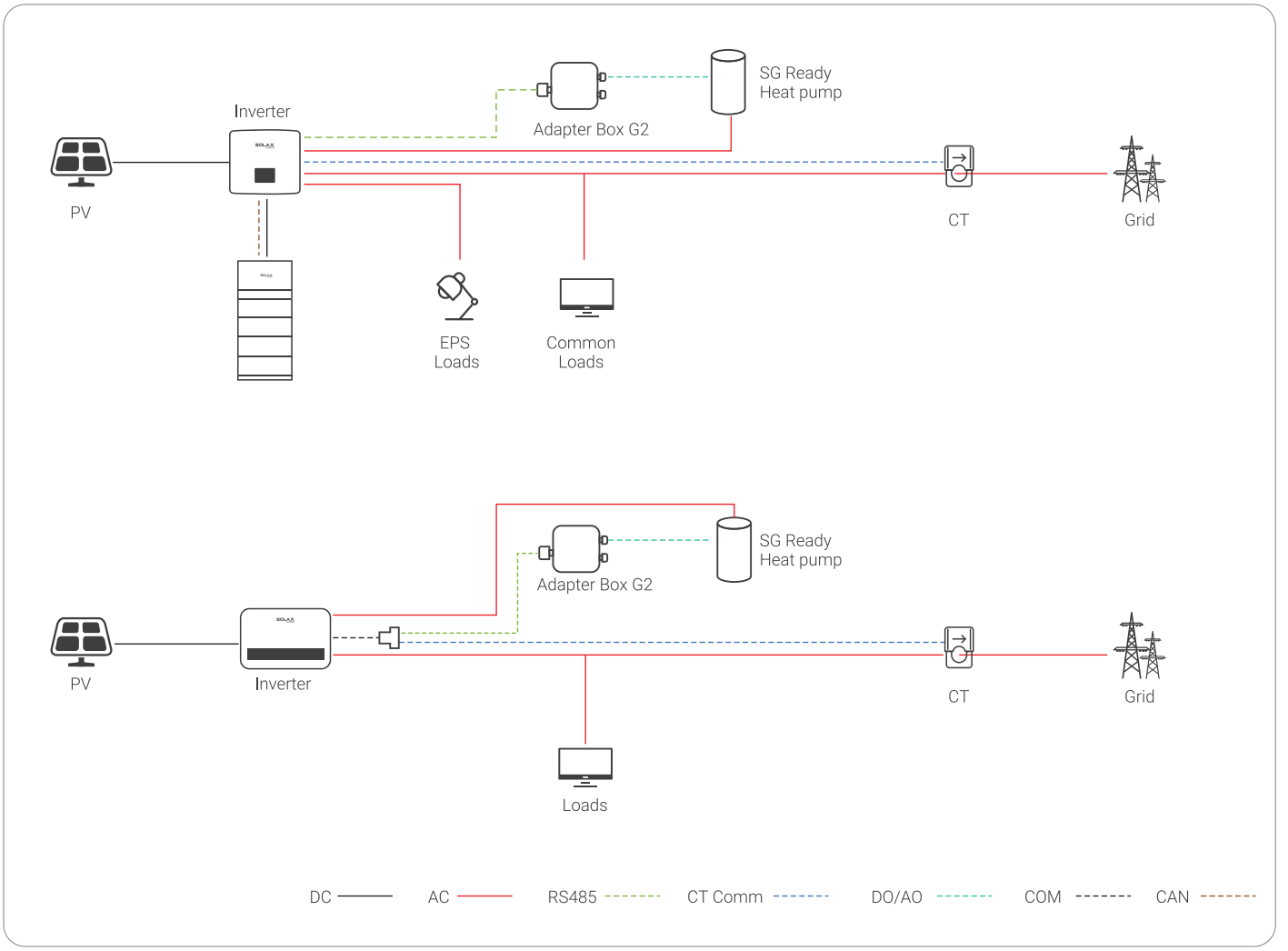
Flexible Adaptability

- Customizable schedule control
- Supports multiple types of signals

Adapter Box G2

	ELECTRICAL PARAMETER
Power adapter	100 ~ 240 V, 50 / 60Hz, AC power adapter (Optional), 12V 2A, DC input
Power consumption	2.5 W
Digital output	*4, 2 A 30 Vdc
Analog output	*1, 0 ~ 10 Vdc
	COMMUNICATION
Inverter communication	RS485
Wireless module	WiFi 2.4 GHz
Eirp power	17.46 dBm
Demand control interface	Yes
	GENERAL PARAMETERS
Dimensions (W × H × D)	125 × 125 × 75 mm
Weight	0.4 kg
Operation temperature rangeIngress	-30 ~ 60 °C
protection	IP65
Installation	Wall mounting
	STANDARD
Certifications	RED / FCC / RCM / RoHS

Solutions



Accessories

M1-40

M3-40

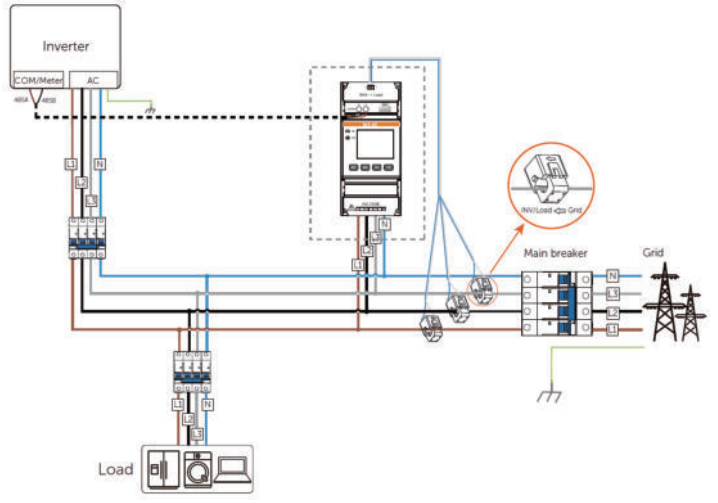
M3-40-Dual

- Plug-and-play CT solution for easy installation
- Supports remote settings via SolaX Cloud APP
- 50ms high refresh rate for more precise and faster control
- Separates strong and weak currents for enhanced security
- Intelligent phase sequence and CT direction adjustment, automatically resolving installation issues
- Capable of monitoring power from both the grid and third-party inverters simultaneously*

** supported only by the two-curcuit model: M3-40-Dual*

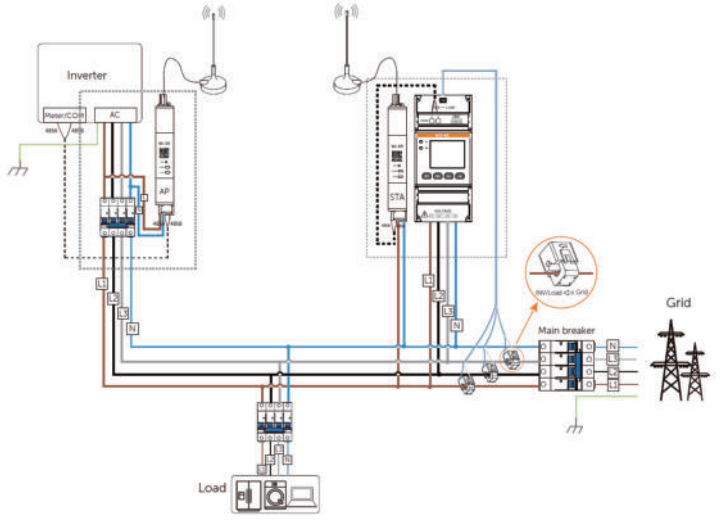
	M1-40	M3-40	M3-40-Dual
Power grid type	1P2W	3P3W / 3P4W	
Rated voltage	220 V ~ 240 V	3 × 220 / 380 V ~ 3 × 240 / 415 V	3 × 57.7 / 100 V ~ 3 × 240 / 415 V
Operating voltage	100 V~288 V	100 V ~ 280 V	50 V ~ 480 V
Current	*A / 40 mA		
Recommended CT specification	100 A / 40 mA, 200 A / 40 mA, 400 A / 40 mA, 600 A / 40 mA, 1000 A / 40 mA, 1500A / 40mA, 2000A / 40mA		
Power consumption	< 1.2 W	< 1.5 W	< 1.2 W
Measurement accuracy class	Voltage and current: Class 0.5 Active power: Class 1 Reactive power: Class 2		
Resolution requirement	Active power: 0.1 W Frequency: 0.001 Hz		
Frequency	45 Hz ~ 65 Hz		
Frequency tolerance	0.01 Hz		
Operating temperature	-40°C~70°C		
Operating humidity	≤95% RH (non-condensing)		
Operating altitude	< 4000 m		
Degree of protection	IP20		
Dimensions (W × H × D)	18 mm × 100 mm × 65.5 mm	45 mm × 100 mm × 65.5 mm	72 mm × 100 mm × 65.5 mm

Solutions



M3-40
Networking through RS485 cable

- L1 wire
- L2 wire
- L3 wire
- N wire
- PE wire
- I* wire
- I wire
- RS485A wire
- RS485B wire



M3-40
Wireless data transmission through Wi-BR

- L1 wire
- L2 wire
- L3 wire
- N wire
- PE wire
- I* wire
- I wire
- RS485A wire
- RS485B wire

Accessories

Wireless Bridge

Wi-BR

Wide Coverage

- Efficient and stable data transmission up to 200m

Strong Penetration

- Penetration ability up to 4 floors (about 30 meters vertically)

Intelligent Design

- DIN-rail installation for 85-277V AC power supply

Flexible Adaptability

- Compatible with single & three-phase meters

** Wireless communication may be affected by obstacles in complex environments, reducing transmission distance. Lab data shows that it can reach up to 200 meters horizontally in open spaces. However, with walls blocking the signal, installation distance should be reduced, supporting up to 4 layers of partition walls (about 30 meters vertically)*

	Wi-BR
Working method	AP / STA
Procotol	IEEE 802.11ah
Communication terminal	RS485 * 1 (for each model)
Phase voltage	85 ~ 277 Vac
Max. power consumption	2 W
Operating temperature	-25 ~ 55°C
Dimensions	18 × 98 × 66 mm
Mounting type	DIN rail
Ingress protection rating	IP20
Altitude	≤ 2000 m

Comparison of the performance of four methods across different communication aspects

The following data is obtained through actual testing using inverter equipped with electricity meter in Solax laboratory.

The actual on-site transmission distance may vary depending on the installation environment.

Secuirty	SolaX	Wi-Fi	LORA	Zigbee
Performance	Best	Best	Poor	Good

Anti-interfernce	SolaX	Wi-Fi	LORA	Zigbee
Performance	Best	Best	Poor	Good

Transmission capability	SolaX	Wi-Fi4/5/6	LORA	Zigbee
Transmission distance	200m	100m	130m	20m

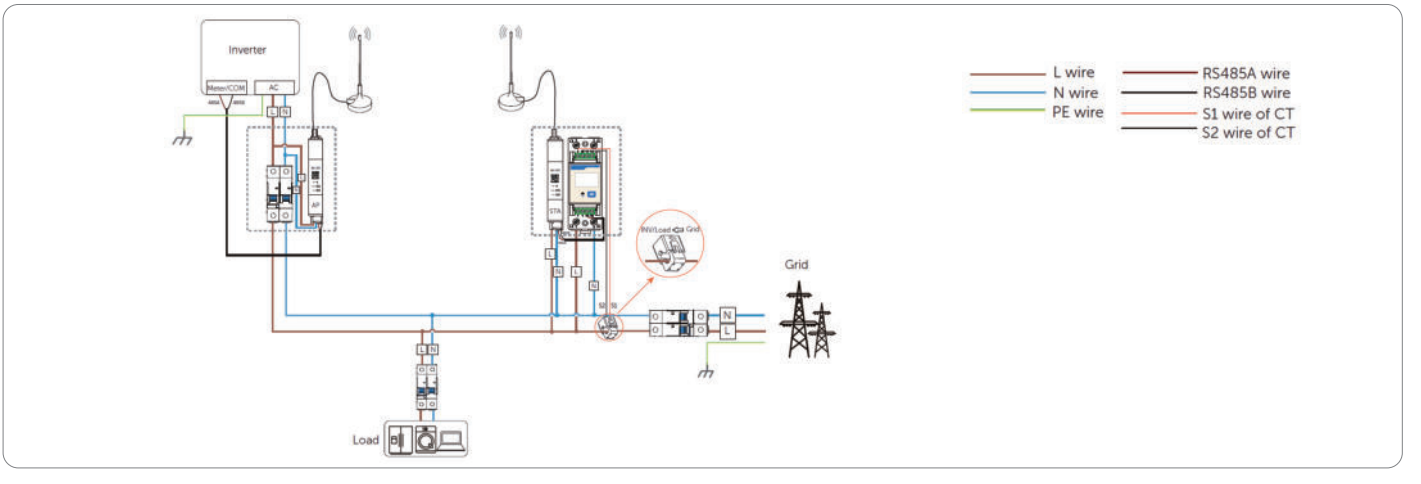
*The test data was obtained in an open area without any barriers.

Signal penetration①	SolaX	Wi-Fi	LORA	Zigbee
Number of floor②	4	1	3	1

*The results were obtained under test conditions of penetrating 120 cm thick reinforced concrete, with a floor-to-floor spacing of 4.5 meters.

① The wall-penetration test is an independent scenario, and its data does not affect or interact with the open-space scenario data
② The complete functions of the inverter can work properly through control across this number of floors

Installation



*The product images are for illustration only and may have slight differences from the actual product

Accessories

X1 EPS BOX
X3 EPS BOX

EPS Box integrates two contactors which provide power steering for users. It is compatible with single-phase and three-phase inverters. Together with inverter, EPS Box can achieve intelligent switch between on-grid connection and off-grid connection. It can simplify the operation and improve security.

Supports whole-home backup

Simplifies wiring with integrated dual contactors

	X1 EPS BOX	X3 EPS BOX
	GRID	
Max.AC input current	63 A	3 × 63 A
Rated AC voltage	230 V	3 / N / PE, 400 / 230 V
Rated AC frequency	50 / 60 Hz	50 / 60 Hz
	EPS	
Max.EPS input current	32 A	3 × 63 A
Rated EPS voltage	230 V	3 / N / PE, 400 / 230 V
Rated EPS frequency	50 / 60 Hz	50 / 60 Hz
	LOAD	
Rated output current, on grid mode	63 A	3 × 63 A*
Rated output current, EPS mode	32 A	3 × 63 A*
Rated grid voltage	230 V	3 / N / PE, 400 / 230 V
Rated grid frequency	50 / 60 Hz	50 / 60 Hz
	GENERAL DATA	
Operating temperature	-20 ~ 60°C	-20 ~ 60°C
Switch time	0.5 s	0.5 s
Dimension	300 × 220 × 170 mm	300 × 220 × 170 mm
Weight	3.5 kg	4.85 kg
Degree of protection	IP65	IP65

* : The output current will be reduced when the operating temperature exceeds 40°C. At 50°C, the output current drops to 95% . At 60°C, it drops to 80%.

ENERGY STORAGE PRODUCTS

SEM

Remote Monitoring Around The Clock

SolaX Cloud Monitoring

Feature

- Smart Schedule & Smart Scene AI-driven smart energy management
- Local & Remote monitoring, setting, and upgrade of batch inverters
- Intelligent export control, DRM control, and ripple control, etc., of batch inverters
- Support large-capacity data storage

DataHub1000

	DataHub
Model	DataHub1000
Power adapter	100-240V 50/60HZ 1.5A AC input 12V 2A DC output
Wireless module	Wi-Fi 2.4GHz
Ethernet	10/100M
Manage device quantity	60
Interface	RS485 x 4, CAN x 1, Ethernet x1
Dry contactor	AI x 2, DI x 4, DO x 4
Data transfer interval	5 mins
Expanded storage capacity	8G/16G TF card（Optional）
Dimensions	205 x 124 x 33 mm
Weight	410 g
Degree of protection	IP21
Operating temperature range	-20 ~ +60°C

**V1.3. Information may be subject to modify without notice. 650.00016.00*

Pocket WiFi V3.0-P

Feature

- Quick installation with "Plug & Play" function
- IP65 dust prevention and waterproof design
- Stable data transmission and good reliability
- Offline data storage and resume
- Multiple antenna adaptations according to the situation
- 10-second live data monitoring
- Modbus TCP support
- IEEE2030.5 support*
- OpenADR support*

Pocket WiFi	
Model	Pocket WiFi V3.0-P
Power supply	5V 260mA DC
Wireless module	WiFi 2.4 GHz
Antenna gain	3 dBi
Data transfer interval	5 mins / 10s optional
Dimensions	112 x 45.7 x 28.5 mm
Weight	107 ± 10 g
Degree of protection	IP65
Operating temperature range	-35 ~ +60°C

Pocket WiFi+LAN

Feature

- Quick installation with "Plug & Play" function
- IP65 dust prevention and waterproof design
- Stable data transmission and good reliability
- Offline data storage and resume
- 10-second live data monitoring
- Modbus TCP support
- IEEE2030.5 support*
- OpenADR support*
- Supports automatic switching between WiFi and LAN in different scenarios

Pocket LAN	
Model	Pocket WiFi+LAN
Power supply	5V 200mA DC
Wireless module	WiFi 2.4 GHz
Ethernet	10/100 M
Antenna gain	3 dBi
Data transfer interval	5 mins / 10s optional
Dimensions	112 x 45.7 x 28.5 mm
Weight	80 ± 10 g
Degree of protection	IP65
Operating temperature range	-35 ~ +60°C

Pocket WiFi+4GM

Feature

- Quick installation with "Plug & Play" function
- IP65 dust prevention and waterproof design
- Stable data transmission and good reliability
- Offline data storage and resume
- 10-second live data monitoring
- Modbus TCP support
- IEEE2030.5 support*

Pocket 4G	
Model	Pocket WiFi+4GM
Power supply	5V 200mA DC
Wireless module	WiFi 2.4 GHz
Antenna gain	3 dBi
Sim card size	Nano - 4FF 12.3 x 8.8 mm
Support band	LTE-FDD: Cat M1: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/ B20/B25/B26/B27/B28/B66/B85 Cat NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/ B20/B25/B28/B66/B71/B85
Data transfer interval	5 mins / 10s optional
Dimensions	112 x 45.7 x 28.5 mm
Weight	124 ± 10 g
Degree of protection	IP65
Operating temperature range	-35 ~ +60°C

**Requires inverter and SolaX Cloud platform support for full functionality*

SUCCESS STORIES

SUCCESS STORIES

ESS-TRENE | Germany | 3MWh

ESS-TRENE | China | 3MWh

ESS-TRENE Netherlands 1.08MWh

ESS-AELIO Netherlands 1.8MWh

SOLAX POWER | BVB 09 PARTNER

Scan for digital version

Follow us on social media

SOLAX POWER NETWORK TECHNOLOGY (ZHEJIANG) CO., LTD.

Web: www.solaxpower.com
E-mail: info@solaxpower.com