ATESS

ATESS

ESS Brochure

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Shenzhen ATESS Power Technology Co., Ltd

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*Catalog data is subject to occasional updates, kindly reconfirm with ATESS staff prior to order placement.

Energizing the future

About us

We are committed to energizing the future with clean energy

Shenzhen ATESS Power Technology Co., Ltd. is a subsidiary of Growatt group, headquartered in GROWATT-ATESS Industrial Park, Shuitian 4th Industrial Zone, Bao'an District, Shenzhen. The park covers an area of 31,600 m² and the manufacturing center covers an area of 25,000 m². It is a comprehensive smart industrial park integrating R&D, manufacturing, and sales of new energy products.

ESS & EV charging solutions supplier

31,600 m² industrial park

Thousands of tonnes of CO_2 emission reduced

Clean power delivered to 100,000+ users

12 years experience in ESS

200,000+ EV chargers installed

Milestone

Our History

Our R&D team

ATESS boasts an R&D team of over 100 highly experienced engineers. Our laboratory is fully equipped with advanced testing instruments to ensure top-notch product performance and quality, as well as customers' needs. We dedicate around 15% of our annual revenue to research and development each year to keep our products competitive.

100+

100+ R&D engineers

12

12 years experience

50%+

50%+ engineers with master's degree

15%

15% of annual revenue as R&D investment

Branches

Our vision

Over the past years, ATESS has helped thousands of users and companies produce and consume green energy independently according to their individual needs, saving millions of tonnes of CO_2 emission. This motivates us to continually strive to create and innovate, on the universal carbon neutralization goal, and also a greener future energized by renewable energy technology.

Headquarter

Office/warehouse

90+
Countries
Delivered clean power to 90+ Countries

15
Branches
15 Offices and warehouses Worldwide

10
Years
Systems operating 10+ years

Index

HPS15000TL/HPS20000TL
HPS30000TL

15-30kW three phase all-in-one hybrid inverter for small commercial use.

Features

- All-in-one hybrid inverter
- ATS function inbuilt
- IP65 waterproof design
- Seamless on/off grid transfer within 10 ms
- Max. 10 units in parallel for on&off grid operation
- Support remote control of DG
- Programmable working mode
- Multiple MPPT inputs

	HPS15000TL	HPS20000TL	HPS30000TL
AC(on-grid)			
Apparent power	16kVA	22kVA	33kVA
Rated power	15kW	20kW	30kW
Rated voltage	400V	400V	400V
Rated current	21A	28A	43A
Voltage range	360V-440V	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%	<3%
PF	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading
AC connection	3L/N/PE	3L/N/PE	3L/N/PE
MAX. AC Input Power	22.5kW	30kW	45kW
AC(off-grid)			
Apparent power	16kVA	22kVA	33kVA
Rated power	15kW	20kW	30kW
Rated voltage	400V	400V	400V
Rated current	21A	28A	43A
THDU	≤2% linear		
Rated frequency	50/60Hz		
Overload capability	110%-10 mins 120%-1 min, 150%-10s		
DC (Battery and PV)			
Max. PV Open-circuit voltage	1000V	1000V	1000V
Max.PV access power	30kWp	40kWp	60kWp
Max.PV input power	23kWp	30kWp	45kWp
PV MPPT voltage range	125V-850V	125V-850V	125V-850V
Number of MPPT	2	2	2
PV input/MPPT	2/2	2/2	2/2
PV input current	40/40A	40/40A	40/40A
Max. PV Isc	60/60A	60/60A	60/60A
Max. PV Isc/Channel	20A	20A	20A
Battery voltage range	150-700V	150-700V	150-700V
Full load battery voltage range	300-700V	300-700V	420-700V
Max. charge/discharge power	15kW	20kW	30kW
Max. charge/discharge current	50A	66A	75A
General Information			
Protection devices	PV DC switch, PV fuse, battery breaker and fuse		
Protection degree	IP65		
Noise emission	<65dB(A)@1m		
Operating temperature	-40 °C~+60 °C		
Cooling method	Intelligent air cooling		
Relative humidity	0-100% non-condensing		
Max. altitude	5000m (derate over 3000m)		
Dimension (W/H/D)	450/635/225mm		
Weight	45kg		
Topology	Transformerless		
Lightning protection	Type II		
Transfer between on/off grid	Automatic≤10ms		
Standby consumption	<20W		
Communication			
Display	Touch screen		
Communication	RS485/CAN		
Certificate			

CE , EN IEC 61000-6-4:2019 , EN 61000-3-12:2011 , EN IEC 61000-3-11:2019 , EN IEC 61000-6-2:2019 , EN62109-1:2010 , EN62109-2:2011 , NRS097-2-1:2017 , AS4777.2

HPS40000TL/HPS50000TL

40-50kW three phase all-in-one hybrid inverter for small commercial use.

Features

- All-in-one hybrid inverter
- ATS function inbuilt
- IP65 waterproof design
- Seamless on/off grid transfer within 10 ms
- Max. 10 units in parallel for on&off grid operation
- Support remote control of DG
- Programmable working mode
- Multiple MPPT inputs

	HPS40000TL	HPS50000TL
AC(on-grid)		
Apparent power	44kVA	55kVA
Rated power	40kW	50kW
Rated voltage	400V	400V
Rated current	57A	72A
Voltage range	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%
PF	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading
AC connection	3L/N/PE	3L/N/PE
Max. AC Input Power	60kW	70kW
AC(off-grid)		
Apparent power	44kVA	55kVA
Rated power	40kW	50kW
Rated voltage	400V	400V
Rated current	57A	72A
THDU	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min, 150%-10s	110%-10 mins 120%-1 min, 150%-10s
DC (Battery and PV)		
Max. PV Open-circuit voltage	1000V	1000V
Max. PV access power	80kWp	100kWp
Max. PV input power	60kWp	75kWp
PV MPPT voltage range	125V-850V	125V-850V
Number of MPPT	3	3
PV input/MPPT	2/3/3	2/3/3
PV input current	40/60/60A	40/60/60A
Max. PV Isc	60/90/90A	60/90/90A
Max. PV Isc/Channel	20A	20A
Battery voltage range	150-800V	150-800V
Full load battery voltage range	430-700V	500-700V
Max. charge/discharge power	40kW	50kW
Max. charge/discharge current	100A	100A
General Information		
Protection devices	PV DC switch, PV fuse, battery breaker and fuse	
Protection degree	IP65	
AFCI function	Optional	
Noise emission	<65dB(A)@1m	
Operating temperature	-40 °C~+60 °C	
Cooling method	Intelligent air cooling	
Relative humidity	0-100% non-condensing	
Max. altitude	5000m (derate over 3000m)	
Dimension (W/H/D)	600/990/280mm	
Weight	90kg	
Topology	Transformerless	
Lightning protection	Type II	
Transfer between on/off grid	Automatic≤10ms	
Standby consumption	<20W	
Communication		
Display	Touch screen	
Communication	RS485/CAN	
Certificate		
CE , EN IEC 61000-6-4:2019 , EN 61000-3-12:2011 , EN IEC 61000-3-11:2019 , EN IEC 61000-6-2:2019 , EN62109-1:2010 , EN62109-2:2011 , NRS097-2-1:2017 , AS4777.2		

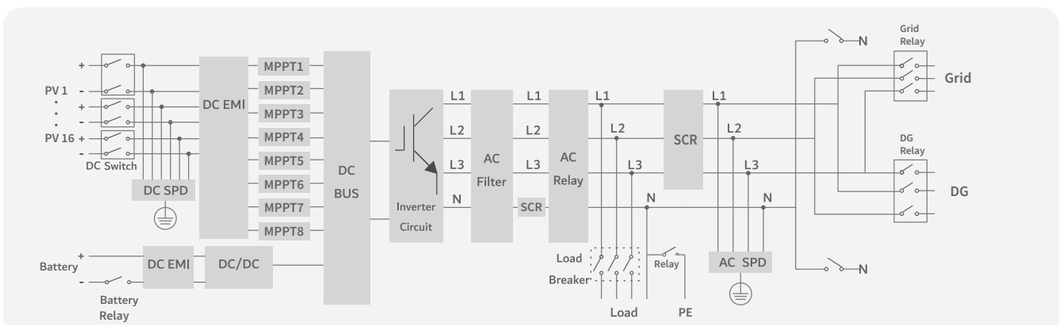
HPS100000TL/HPS125000TL

100-125kW three phase all-in-one hybrid inverter for small commercial use.

Features

- IP65 waterproof design
- Higher Single-unit Output Power
- All-in-one hybrid inverter, ATS function inbuilt
- Seamless on/off grid transfer within 10 ms
- Max. 10 units in parallel for on&off grid operation
- Support remote control of DG
- Programmable working mode
- Multiple MPPT inputs

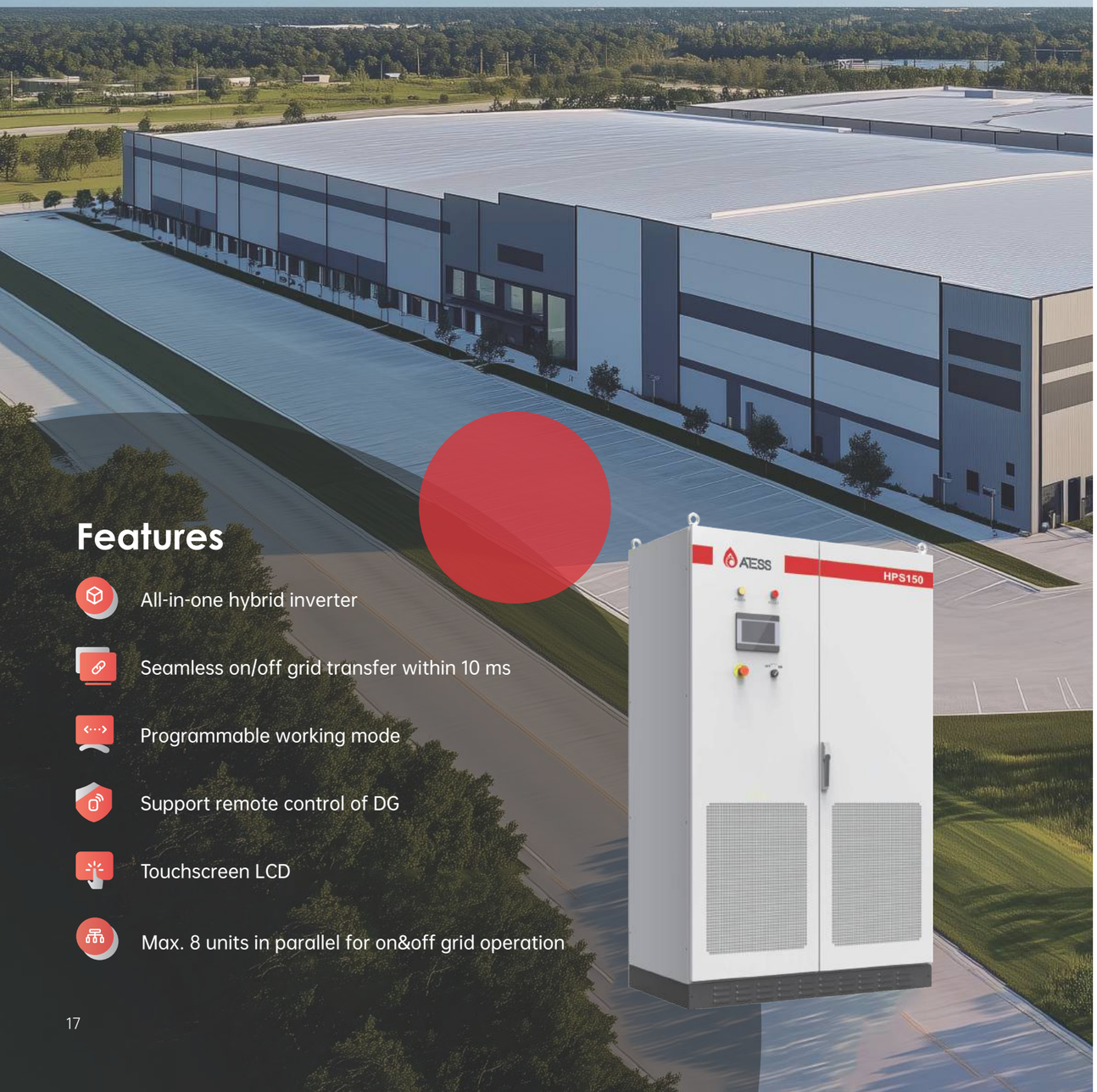
Block Diagram



	HPS100KTL	HPS125KTL
AC(on-grid)		
Apparent power	100kVA	125kVA
Rated power	100kW	125kW
Rated voltage	220/380Vac, 230/400Vac	220/380Vac, 230/400Vac
Rated current	144A	181A
Voltage range	196-253Vac/340-440Vac	196-253Vac/340-440Vac
Rated frequency	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%
PF	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading
AC connection	3L/N/PE	3L/N/PE
Max. AC input power	150kW	187.5kW
AC(off-grid)		
Apparent power	100kVA	125kVA
Rated power	100kW	125kW
Rated voltage	400V	400V
Rated current	144A	181A
THDU	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	120%-10 mins 130%-1 min 150%-10s	120%-10 mins 130%-1 min 150%-10s
DC (Battery and PV)		
Max. PV Open-circuit voltage	1000V	1000V
Max.PV access power	200kWp	250kWp
Max.PV input power	150kWp	187.5kWp
PV MPPT voltage range	125V-850V	125V-850V
Number of MPPT	6	8
PV input/MPPT	2/2/2/2/2/2	2/2/2/2/2/2/2/2
PV input current	40/40/40/40/40/40A	40/40/40/40/40/40/40/40A
Max. PV Isc	60/60/60/60/60/60A	60/60/60/60/60/60/60/60A
Max. PV Isc/Channel	20A	20A
Battery voltage range	150-900V	150-900V
Full load battery voltage range	500-900V	500-900V
Max. charge/discharge power	100kW	125kW
Max. charge/discharge current	200A	200A
General Information		
Max. efficiency	97.6%	97.6%
Protection degree	IP65	IP65
AFCI Function	Optional	Optional
Noise emission	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-40 °C~+60 °C	-40 °C~+60 °C
Cooling method	Intelligent air cooling	Intelligent air cooling
Relative humidity	0-100% non-condensing	0-100% non-condensing
Max. altitude	5000m (derate over 3000m)	5000m (derate over 3000m)
Dimension (W/H/D)	960/680/300mm	960/680/300mm
Weight	138kg	138kg
Topology	Transformerless	Transformerless
Lightning protection	Type II	Type II
Transfer between on/off grid	Automatic≤10ms	Automatic≤10ms
Standby consumption	<50W	<50W
Communication		
Display	Touch screen	Touch screen
Communication	RS485/CAN/WiFi/4G(optional)	RS485/CAN/WiFi/4G(optional)

HPS30/50
HPS100/120/150

Large capacity all-in-one hybrid inverter for commercial application, supporting up to 1200kW system capacity.



Features

- All-in-one hybrid inverter
- Seamless on/off grid transfer within 10 ms
- Programmable working mode
- Support remote control of DG
- Touchscreen LCD
- Max. 8 units in parallel for on&off grid operation

	HPS30	HPS50	HPS100	HPS120	HPS150
AC(on-grid)					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
AC input	60kVA	100kVA	200kVA	240kVA	240kVA
Voltage range	360V-440V				
Rated frequency	50/60Hz				
Frequency range	45~55/55~65Hz				
THDI	<3%				
PF	0.8 lagging~0.8 leading				
AC connection	3/N/PE				
AC(off-grid)					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
THDU	≤2% linear				
Rated frequency	50/60Hz				
Overload capability	110%-10 mins 120%-1 min				
DC (Battery and PV)					
Max. PV open-circuit voltage	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC
Max. PV power	45kWp	75kWp	150kWp	180kWp	225kWp
PV MPPT voltage range	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC
Battery voltage range at Max. charge power	450V-600V	500V-600V	500V-600V	517V-600V	500V-600V
Battery voltage range	352V-600V	352V-600V	352V-600V	352V-600V	352V-600V
Max. charge power	45kW	75kW	150kW	180kW	225kW
Max. discharge power	33kW	55kW	110kW	132kW	165kW
Max. charge current	100A	150A	300A	350A	450A
Max. discharge current	93A	156A	313A	374A	467A
General Information					
Dimension (W/H/D)	700/1660/600mm	950/1860/750mm	1200/1900/800mm	1200/1900/800mm	1200/1900/800mm
Weight	355kg	610kg	948kg	1025kg	1230kg
Build-in transformer	Yes	Yes	Yes	Yes	Yes
Lightning protection	Type II	Type II	Type II	Type II	Type II
Protection degree	IP20				
Noise emission	<65dB(A)@1m				
Operating temperature	-25 °C~+55 °C				
Cooling method	Forced-air				
Relative humidity	0-95% non-condensing				
Max. altitude	6000m (derate over 3000m)				
Transfer between on/off grid	Automatic≤10ms				
Standby consumption	<30W				
Communication					
Display	Touch screen				
Communication	RS485/CAN				
Certificate					
CE , MEA , PEA , UKCA, AS 4777.2, EN 61000-6-2:2019 , EN 61000-6-4:2019 , EN62109-1:2010 , EN62109-2:2011 , EN 50549-1:2019 , IEC62109.1 , IEC62109.2, NRS 097-2-1:2017, G99, VDE-AR-N 4105:2018,DIN VDE V 0124-100:2020-06, PSE:2018-12, DEWA					

* The MPPT voltage of PV strings should be 50~200V higher than the Max battery voltage.

HPS100/150HV

Large capacity all-in-one hybrid inverter for commercial application, supporting up to 1200kW system capacity.

Features

Multiple MPPTs
2 MPPTs to increase the possibility of PV access, improve the power generation efficiency of solar.

High Battery Voltage Range
600-900V Battery voltage to expand battery configuration flexibility, improve system efficiency.

High PV Voltage range
1500V Level PV voltage to reduce the number of PV cables, lower system investment costs.

- Touchscreen LCD
- Programmable working mode
- Seamless on/off grid transfer within 10 ms
- Support remote control of DG
- All-in-one hybrid inverter
- Max. 8 units in parallel for on&off grid operation

	HPS100HV	HPS150HV
AC(on-grid)		
Apparent power	110kVA	165kVA
Rated power	100kW	150kW
Rated voltage	400V	400V
Rated current	144A	217A
Voltage range	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%
PF	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading
AC connection	3/N/PE	3/N/PE
AC input	200kVA	240kVA
AC(off-grid)		
Apparent power	110kVA	165kVA
Rated power	100kW	150kW
Rated voltage	400V	400V
Rated current	144A	217A
THDU	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
DC (Battery and PV)		
Max. PV open-circuit voltage	1500V DC	1500V DC
Max. PV power	150kWp	225kWp
PV MPPT voltage range	900V-1300V DC	900V-1300V DC
MPPT number	2	2
Max. PV current	2*80A	2*100A
Battery voltage range	600-900V	600-900V
Battery voltage range at max. charge power	804V-900V	804V-900V
Max. charge power	150kW	225kW
Max. discharge power	110kW	165kW
Max. charge current	187A	280A
Max. discharge current	183A	275A
General Information		
Protection degree	IP20	IP20
Noise emission	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C
Cooling method	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing
Max. altitude	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	1200/1900/800mm	1200/1900/800mm
Weight	948kg	1230kg
Build-in transformer	Yes	Yes
Lightning protection	Type II	Type II
Transfer between on/off grid	Automatic≤10ms	Automatic≤10ms
Standby consumption	<30W	<30W
Communication		
Display	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN

PCS100/250/500/630/1000

Bidirectional battery inverter from 100kW to 1000kW, can be used alone or with solar charge controllers and other accessories for different application scenarios.

Features

- Programmable working mode
- Flexible configuration
- Touchscreen LCD
- Support remote control of DG
- Max. 8 units in parallel for on&off grid operation

	PCS100	PCS250	PCS500	PCS630	PCS1000
AC(on-grid)					
Apparent power	110kVA	275kVA	550kVA	693kVA	1000kVA
Rated power	100kW	250kW	500kW	630kW	1000kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	144A	361A	722A	909A	1443A
Voltage range	360V-440V	360V-440V	360V-440V	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz				
THDI	<3%				
PF	0.8 lagging~0.8 leading				
AC connection	3/N/PE	3/N/PE	3/PE	3/PE	3/PE
Max. rectified power	100kW	250kW	500kW	630kW	750kW
AC(off-grid)					
Apparent power	110kVA	275kVA	550kVA	693kVA	1000kVA
Rated power	100kW	250kW	500kW	630kW	1000kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	144A	361A	722A	909A	1443A
THDU	≤2% linear				
Rated frequency	50/60Hz				
Overload capability	110%-10 mins 120%-1 min				
DC (Battery)					
Rated power	100kW	250kW	500kW	630kW	1000kW
Current regulation	±1%	±1%	±1%	±1%	±1%
Voltage regulatoin	±1%	±1%	±1%	±1%	±1%
Voltage ripple	<3%	<3%	<3%	<3%	<3%
Current ripple	<2%	<2%	<2%	<2%	<2%
Voltage range	500V-820V	500V-820V	600V-900V	600V-900V	650V-900V
Max. charge/discharge current	220A	550A	917A	1155A	1154A/1600A
General Information					
Max. efficiency	97.10%	97.30%	98.50%	98.50%	99.0%
Dimension(W/H/D)mm	1100/1890/850	1600/2080/850	1200/1900/800	1200/1900/800	1510/1900/850
Weight	820kg	1465kg	870kg	900kg	1500kg
Build-in transformer	Yes	Yes	No	No	No
Lightning protection	Type II	Type II	Type II	Type II	Type II
Protection degree	IP20				
Noise emission	<65dB(A)@1m				
Operating temperature	-25°C~+55°C				
Cooling method	Forced-air				
Relative humidity	0-95% non-condensing				
Max. altitude	6000m(derate above 3000m)				
Transfer between on/off grid	Manual(default)，Automatic(optional)≤10ms				
Grid support	L/HVRT, FRT, active & reactive power control and power ramp rate control. Volt-var, Volt-watt. Frequency-watt				
Communication					
Display	Touch screen				
Communication	RS485/CAN				
Certificate					
PCS100/250/500/630	CE , MEA , PEA , EN 61000-6-2:2019 , EN 61000-6-4:2019 , EN62109-1:2010 , EN62109-2:2011, NRS 097-2-1:2017, VDE 0126, UTE C-15-712, EN 50549-1:2019, AS/NZS 4777.2:2020，AS IEC 62477-1:2016，NC RfG，G99，DEWA Annex D.3:2016，CEI 0-16:2022，EN 62920:2017+A1:2021				
PCS1000	EN 61000-6-4:2019, EN 55011:2016+A2:2021, EN 61000-6-2:2019, IEC 61000, EN 62920:2017/A1:2021, CISPR 11:2015/A1:2016				

PCS500HV/630HV

Bidirectional battery inverter from 500-630kW, can be used alone or with solar charge controllers and other accessories for different application scenarios.

Features

HIGH YIELD

- Advanced three-level technology, max. efficiency 97%
- Effective forced air cooling, no derating up to 45°C
- Wide DC voltage operation window, full power operation at 1500V
- Max. 8 units in parallel in off-grid operation

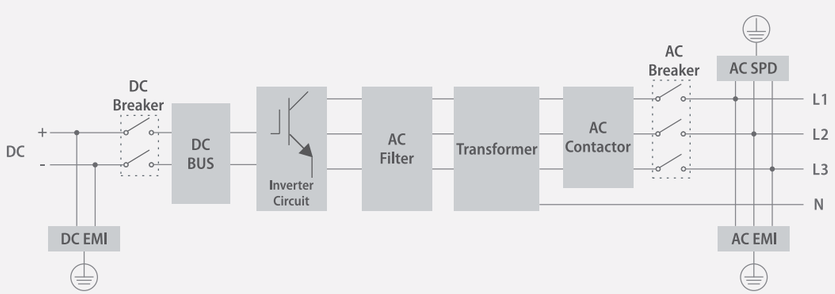
FLEXIBLE APPLICATION

- Bidirectional power conversion system with full four-quadrant operation
- Compatible with high voltage battery system, low system cost
- Battery charge & dis-charge management and black start function integrated

GRID SUPPORT

- Fast active/reactive power response
- L/HVRT, FRT, soft start/stop, specified power factor control and reactive power support

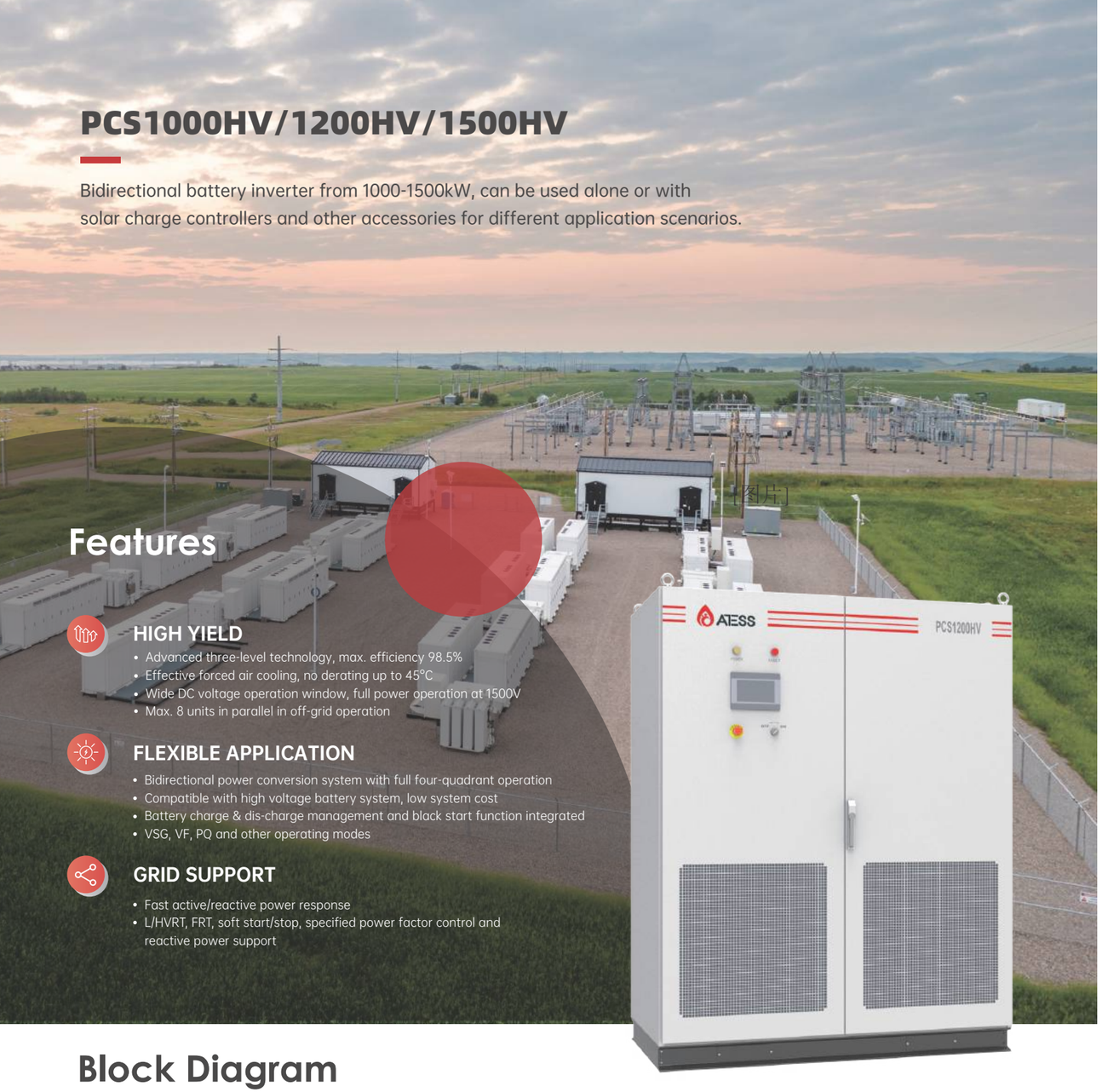
Block Diagram



	PCS500HV	PCS630HV
AC(on-grid)		
Apparent power	500kVA	630kVA
Rated power	500kW	630kW
Max. AC input	500kW	630kW
Rated voltage	400Vac	400Vac
Rated current	722A	910A
Voltage range	340V-440V	340V-440V
Rated frequency	50/60Hz	50/60Hz
Frequency range	46-54/56-64Hz	46-54/56-64Hz
THDI	<3%(@Pac,r)	<3%(@Pac,r)
PF	0.9 lagging~0.9 leading	0.9 lagging~0.9 leading
AC connection	3/PE	3/PE
AC(off-grid)		
Apparent power	500kVA	630kVA
Rated power	500kW	630kW
Rated voltage	400Vac	400Vac
Rated current	722A	910A
THDU	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
DC (Battery and PV)		
Voltage range	800-1500V	1000-1500V
Max. charge/discharge power	500kW	630kW
Max. charge/ discharge current	625A	630A
Voltage regulatoin	±1%	±1%
Current regulatoin	±1%	±1%
Voltage ripple	<3%	<3%
Current ripple	<2%	<2%
General Information		
Max. efficiency	97%	97%
Protection degree	IP20	IP20
Noise emission	<65dB(A)@lm	<65dB(A)@lm
Operating temperature	-25°C~+55°C	-25°C~+55°C
Cooling method	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing
Max. altitude	6000m(derate over 3000m)	6000m(derate over 3000m)
Dimension(W/H/D)	1200/1900/800mm	1200/1900/800mm
Weight	905kg	905kg
Standby consumption	<100W	<100W
Build-in transformer	No	No
Lightning protection	Type II	Type II
Transfer between on/off grid	Manual(default)	Manual(default)
	Automatic(optional) ≤10ms	Automatic(optional) ≤10ms
Communication		
Display	Touch screen LCD	Touch screen LCD
Communication	RS485/CAN	RS485/CAN

PCS1000HV/1200HV/1500HV

Bidirectional battery inverter from 1000-1500kW, can be used alone or with solar charge controllers and other accessories for different application scenarios.



Features

HIGH YIELD

- Advanced three-level technology, max. efficiency 98.5%
- Effective forced air cooling, no derating up to 45°C
- Wide DC voltage operation window, full power operation at 1500V
- Max. 8 units in parallel in off-grid operation

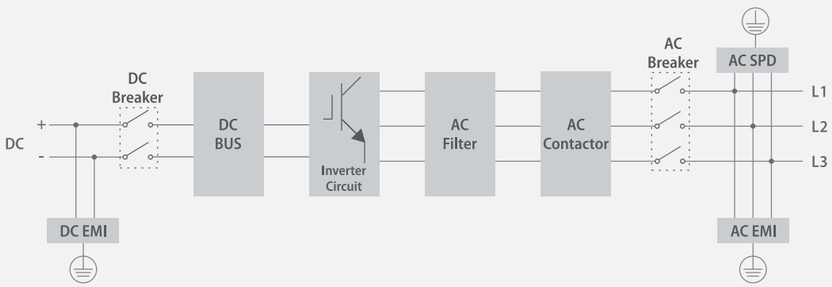
FLEXIBLE APPLICATION

- Bidirectional power conversion system with full four-quadrant operation
- Compatible with high voltage battery system, low system cost
- Battery charge & dis-charge management and black start function integrated
- VSG, VF, PQ and other operating modes

GRID SUPPORT

- Fast active/reactive power response
- L/HVRT, FRT, soft start/stop, specified power factor control and reactive power support

Block Diagram



	PCS1000HV	PCS1200HV	PCS1500HV
AC(on-grid)			
Apparent power	1000kVA	1200kVA	1500kVA
Rated power	1000kW	1200kW	1500kW
Rated voltage	540V	550V	690V
Rated current	1443A	1260A	1260A
Voltage range	360V-440V	495V-605V	621V-759V
Rated frequency	50/60Hz	50/60Hz	50/60Hz
Frequency range	46-54/56-64Hz	46-54/56-64Hz	46-54/56-64Hz
THDI	<3%	<3%	<3%
PF	0.9 lagging~0.9 leading	0.9 lagging~0.9 leading	0.9 lagging~0.9 leading
AC connection	3/PE	3/PE	3/PE
Max. rectified power	1000kW	1200kW	1500kW
AC(off-grid)			
Apparent power	1000kVA	1200kVA	1500kVA
Rated power	1000kW	1200kW	1500kW
Rated voltage	400/540V*	550V	690V
Rated current	1443A	1260A	1260A
THDU	≤2% linear	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
DC (Battery and PV)			
Rated power	1000kW	1200kW	1500kW
Current regulation	±1%	±1%	±1%
Voltage regulatoin	±1%	±1%	±1%
Voltage ripple	<3%	<3%	<3%
Current ripple	<2%	<2%	<2%
Voltage range	900V-1500V	900V-1500V	1000V-1500V
Max. charge/discharge current	1111A	1111A/1334A	1300A/1500A
General Information			
Max. efficiency	98.5%	98.5%	98.5%
Protection degree	IP20	IP20	IP20
Noise emission	<65dB(A)@lm	<65dB(A)@lm	<65dB(A)@lm
Operating temperature	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C
Cooling method	Forced-air	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Max. altitude	5000m(derate over 2000m)	5000m(derate over 2000m)	5000m(derate over 2000m)
Dimension(W/H/D)	1510/2135/890mm	1510/2135/890mm	1510/2135/890mm
Weight	1524kg	1524kg	1524kg
Build-in transformer	No	No	No
Lightning protection	Type II	Type II	Type II
Transfer between on/off grid	Manual(default), Automatic(optional)≤10ms	Manual(default), Automatic(optional)≤10ms	Manual(default), Automatic(optional)≤10ms
Grid support	L/HVRT, FRT, active & reactive power control and power ramp rate control. Volt-var, Volt-watt. Frequency-watt		
Communication			
Display	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN
Certificate			
CE, IEC 62109-1:2010, IEC 62109-2:2011, IEC 61000-6-2:2019, IEC 61000-6-4:2019, IEC 61000-4			

*The direct output voltage of PCS1000HV is 540V, and a transformer is required to output 400V or other voltages.

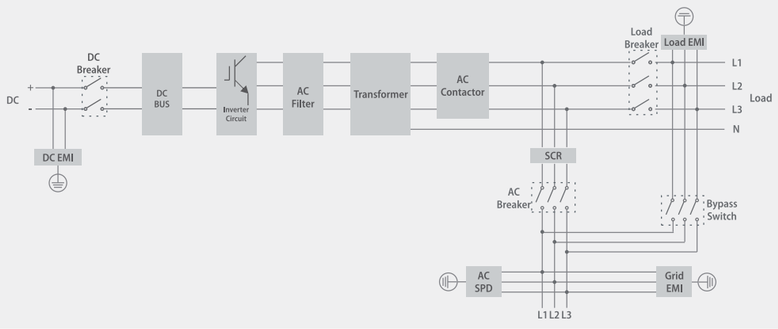
PCS250S/350S

Bidirectional battery inverter from 250kW to 350kW with built-in STS function,
can be used alone or with solar charge controllers and other accessories for different application scenarios.
No need for extra bypass cabinet for grid/off-grid switch.

Features

- Built-in STS
- Seamless on/off grid transfer within 10 ms
- Flexible configuration
- Touchscreen LCD
- Support remote control of DG
- Programmable working mode
- Max. 8 units in parallel for on&off grid operation

Block Diagram



	PCS250S	PCS350S
AC(on-grid)		
Apparent power	250KVA	350KVA
Rated power	250KW	350KW
Max.AC input	375KW	525KW
Rated voltage	400Vac	400Vac
Rated current	361A	505A
Voltage range	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%(@Pac,r)	<3%(@Pac,r)
PF	0.8 lagging~0.8 leading	0.8 lagging~0.8 leading
AC connection	3/N/PE	3/N/PE
AC(off-grid)		
Apparent power	250KVA	350KVA
Rated power	250KW	350KW
Rated voltage	400Vac	400Vac
Rated current	361A	505A
THDU	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
DC (Battery and PV)		
Rated power	250KW	350KW
Current regulation	±1%	±1%
Voltage regulatoin	±1%	±1%
Voltage ripple	<3%	<3%
Current ripple	<2%	<2%
Voltage range	600V-900V	600V-900V
Max. charge/discharge power	275KW	360KW
Max. charge/discharge current	458A	600A
General Information		
Max. efficiency	97.30%	97.50%
Protection degree	IP20	IP20
Noise emission	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25°C~+55°C	-25°C~+55°C
Cooling method	Forced-air	Forced-air
Standby consumption	<100W	<100W
Relative humidity	0-95% non-condensing	0-95% non-condensing
Max. altitude	6000m(derate above 3000m)	6000m(derate above 3000m)
Dimension(W/H/D)	1400/1900/850mm	1400/1900/850mm
Weight	1460kg	1524kg
Build-in transformer	Yes	Yes
Build-in STS	Yes	Yes
Lightning protection	Type II	Type II
Transfer between on/off grid	Manual(default), Automatic(optional)≤10ms	Manual(default), Automatic(optional)≤10ms
Communication		
Display	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN
Certificate		
CE		

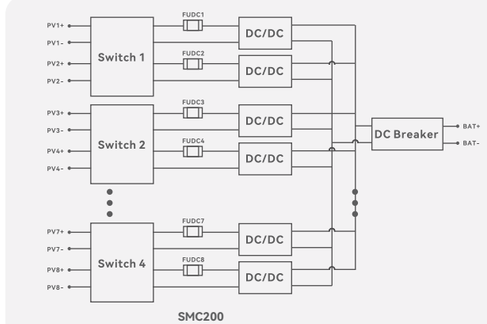
SMC200
SMC200HV

Smart MPPT controller,used together with ATESS PCS for large scale solar projects.

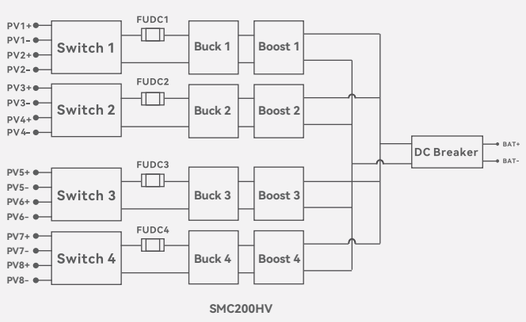
Features

- Modular design
- Up to 8 MPPTs
- Transformerless design
- Multiple units parallelable

Block Diagram



SMC200



SMC200HV

Note:The final configuration depends on the actual PV module parameters or project plan.

	SMC200	SMC200HV
Input(PV)		
Max. PV power	200kW	200kW
Rated PV power	180kW	180kW
MPPT voltage range	900V-1300V	900V-1500V
Max. input current	160A(20A*8)	160A(20A*8)
Number of MPPT	8	4
Output (Battery and PCS)		
Ouput voltage	600V-900V(700V-900V full load)	900V-1500V(1250V-1500V full load)
Max. charge power	180kW	200kW
Max. charge current	280A	160A
Max. charge efficiency	99%	98%
Battery type	Lead-acid or lithium-ion	Lead-acid or lithium-ion
Protection		
Input & output OV/UV protection	Yes	Yes
Input & output OC protection	Yes	Yes
Short circuit protection	Yes	Yes
Over temperature protection	Yes	Yes
Lightning protection	Type II	Type II
DC breaker	Yes	Yes
Emergency stop	Yes	Yes
General Information		
Protection degree	IP65	IP65
Noise emission	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C
Cooling method	Intelligent fan cooling	Intelligent fan cooling
Relative humidity	0-95% non-condensing	0-95% non-condensing
Max. altitude	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	780/770/210 mm	890/660/210 mm
Weight	65kg	68kg
Topology	Transformerless	Transformerless
Standby power	<100W	<100W
Communication		
Communication	RS485/CAN	RS485/CAN

RTF600/600A
RTF1200AHV

Modular rectifier cabinet, 600KW and 1200KW optional, can be combined with ATESS PCS to form a DC coupling solution, suitable for large industrial scenarios.

Features

- AC-DC converter only
- Flexible configuration
- Touchscreen LCD
- Paralleling multiple units

	RTF600	RTF600A	RTF1200AHV
AC(on-grid)			
Rated power	600kW	600kW	1200kW
Rated voltage	400V	400V	400V
Rated current	866A	866A	1732A
Voltage range	360V-440V	360V-440V	360V-440V
Rated frequency	50±10%	50±10%	50±10%
PF	≥0.98	≥0.98	≥0.98
THDI	≤5%	≤5%	≤5%
Efficiency	≥95%	≥95%	≥95%
AC input port	1(grid or generator)	2(grid and generator)	2(grid and generator)
DC(output)			
Voltage range	200Vdc-950Vdc (full above 500V derate below 500V)	500Vdc-1000Vdc	900Vdc-1500Vdc
Max. output current	1200A	1000A	1333A
Output current ripple	≤1%	≤1%	≤1%
Voltage accuracy	≤0.5%	≤0.5%	≤0.5%
Current accuracy	≤1%	≤1%	≤1%
General Information			
Nosie emission	≤68Db(A)@1m	≤68Db(A)@1m	≤80Db(A)@1m
Operating temperature	-40 °C~+45 °C, full load; 45 °C~55 °C, half load	-25 °C~+55 °C (Derating above 45 °C)	-25 °C~+55 °C (Derating above 45 °C)
Storage temperature	-40 °C~85 °C	-40 °C~85 °C	-40 °C~85 °C
Relative humidity	0~95% non-condensing	0~95% non-condensing	0~95% non-condensing
Max. altitude	< 2000m	< 2000m	< 2000m
Cooling method	Forced-air	Forced-air	Intelligent air cooling
Dimension (W/H/D)	1204/1958/853mm	1204/1957/798mm	1902/1902.4/903mm
Weight	350kg	623kg	1299kg
Communication			
Display	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN
Certificate			
CE			

Bypass100/250/500/630/1000

ATESS bypass cabinet is designed to be used together with the bidirectional battery inverter to realize seamless transfer between on-grid and off-grid modes automatically.

Features

- Import/export control
- Seamless on/off grid transfer within 10ms
- Flexible management
- DG connection supported

	Bypass100	Bypass250	Bypass500	Bypass630	Bypass1000
Rated voltage	400V	400V	400V	400V	400V
Rated current	144A	360A	722A	910A	1444A
Rated frequency	50Hz	50Hz	50Hz	50Hz	50Hz
Rated power	100KVA	250KVA	500KVA	630KVA	1000KVA
Max. current	175A	435A	866A	1091A	1732A
Transfer between on/off grid			Automatic≤10ms		
Power limit(grid)	Yes	Yes	Yes	Yes	Yes
PV inverter breaker	250A	630A	1250A	1250A	2000A/3P
PCS breaker	250A	630A	1250A	1250A	2000A/3P
Grid breaker	250A	630A	1250A	1250A	2000A/3P
Load breaker	250A	630A	1250A	1250A	2000A/3P
Bypass breaker	250A	630A	1250A	1250A	1600A/3P
DG breaker	250A	630A	1250A	1250A	2000A/3P
Lightning protection			Type II		
Protection degree			IP20		
Relative humidity			0-95% non-condensing		
Operating temperature			-25 °C~+55 °C		
Dimension (W/H/D)mm	700/1630/500	700/1800/500	1600/1900/800	1600/1900/800	2850/2100/800
Weight	135kg	205kg	900kg	1040kg	1500kg
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

ATS30/50/100/150

The ATS is an accessory of the HPS. When both the grid and DG need to access the HPS, the ATS will be used to switch between the grid and DG automatically.

Features

- HPS compatible
- Flexible management
- Transfer automatically between grid and DG
- Support remote control of DG

	ATS30	ATS50	ATS100	ATS150
Rated voltage	400V	400V	400V	400V
Rated current	86A	144A	288A	346A
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Rated power	60kVA	100kVA	200kVA	240kVA
Output breaker	100A	250A	400A	630A
Grid breaker	100A	250A	400A	630A
DG breaker	100A	250A	400A	630A
Lightning protection	Type II	Type II	Type II	Type II
Protection degree	IP20	IP20	IP20	IP20
Relative humidity	0~95% non-condensing	0~95% non-condensing	0~95% non-condensing	0~95% non-condensing
Operating temperature	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C
Dimension (W/H/D)	600/1500/450mm	600/1500/450mm	700/1650/500mm	700/1650/500mm
Weight	75kg	77kg	125kg	125kg
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

PV-CB8M
PV-CB16M-P

The PV combiner box is an accessory for multiple PV strings connections, and it is with a smart controller inbuilt for monitoring, along with comprehensive protections including the fuse and SPD.

Features

- Lightning protection
- IP65 environment compatibility
- RS485 communication interface
- Monitoring function
- Flexible design with 8 or 16 optional inputs
- Input fuse for over current protection

	PV-CB8M	PV-CB16M-P
Input DC		
Max. input voltage	1000V	1000V
Max. string Isc	20A	20A
Number of input string	8	16
Input fuse	1 on negative and positive pole of each string, 25A, 10*38mm	1 on negative and positive pole of each string, 30A, 10*38mm
Input cable gland	4mm-8mm cable diameter	4mm-8mm cable diameter
Input cable terminal	4mm²–6mm²	4mm²–6mm²
Output DC		
Number of output	1	1
Max. output current	144A	320A
Output breaker	200A	400A
Output cable terminal	50mm²	120mm²
Output cable gland	13mm-18mm cable diameter	18mm-25mm cable diameter
General Information		
Dimension (W/H/D)	600/500/172mm	600/500/202mm
Weight	22.5kg	29kg
Enclosure material	Galvanized steel	Galvanized steel
Protection degree	IP65	IP65
Operating temperature	-25°C~55°C	-25°C~55°C
Humidity	0~99%	0~99%
Altitude	2000m without derating	2000m without derating
Lightning protection	Type II	Type II
Cooling method	Natural convection	Natural convection
Mounting	Wall-mount	Wall-mount
Monitoring	String current, bus voltage, breaker status, surge arrestor status, internal temperature	String current, bus voltage, breaker status, surge arrestor status, internal temperature
Power supply	DC300V~1000V	DC300V~1000V
Power consumption	14W	14W
Communication	RS485	RS485

EnerStack100

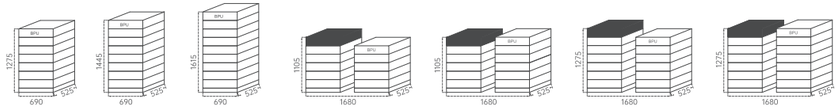
The EnerStack100 outdoor stackable batteries require no complex wiring and can be easily stacked for immediate use. With an IP65 protection rating. they can be deployed outdoors, avoiding taking up indoor space.
An online intelligent operation and maintenance system makes home energy management more worry-free and reliable.

Features

- Foolproof installation
- Efficient deployment
- Future ready
- Intelligent operation and maintenance
- Targeted prevention and control
- IP65 waterproof design

EnerStack100

ATESS ESS-BM-51.2-100CPB-S	
Configuration	16S1P
Rate capacity	100Ah
Rate energy	5.12KWh
Rate voltage	51.2V
Voltage range	44.8~57.6V
Rate charge/discharge	0.5C
Max. charge/discharge	0.65C
AC internal resistance	≤8mΩ
Dimension(W/H/D)	690mm*170mm*525mm
Weight	55Kg
Cell chemistry	LiFePO4
Cooling method	Fan air cooling

Battery cluster specification							
Energy code	BS30	BS35	BS40	BS46	BS51	BS56	BS61
Module Number	6	7	8	9	10	11	12
Weight	308kg	356kg	404kg	464kg	512kg	560kg	608kg
Dimension(W/H/D)mm							
Norminal capacity	100Ah						
Norminal Energy/KWh	5.12n (n=Module Number)						
Norminal Voltage/V	51.2n (n=Module Number)						
Voltage Range/V	44.8n~57.6n (n=Module Number)						
Recommended charge&discharge current	50A(0.5C)						
Max. charge&discharge current	65A(0.65C)						
Depth of discharge	90%						
Cycle life	≥6000 cycles						
Charging temperature range	0°C~55°C						
Disharging temperature range	-20°C~55°C						
Communication	CAN/RS485						
Protection grade	IP65						
Fire extinguishing system	Aerosol						
Installation method	Stacked installation						
Cooling method	Smart air cooling						
Max. altitude	3000m						

Certificate
CE,CB,UL.UN38.3,IEC62619,MSDS,ROHS

EnerStack314

The EnerStack314 indoor stackable batteries require no complex wiring and can be easily stacked for immediate use. Its intelligent temperature control system maintains efficient battery operation around the clock, while its online intelligent operation and maintenance system helps businesses manage energy more easily and reliably.

Features

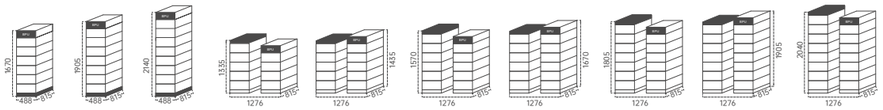
- Foolproof installation
- Efficient deployment
- Future ready
- Intelligent operation and maintenance
- Intelligent temperature control
- Targeted prevention and control

ATESS ESS-BM-51.2-314RPB-S

Configuration	16S1P
Rate capacity	314Ah
Rate energy	16.076KWh
Rate voltage	51.2V
Voltage range	44.8~57.6V
Rate charge/discharge	0.5C
Max. charge/discharge	0.65C
AC internal resistance	≤8mΩ
Dimension(W/H/D)	490mm*282mm*815mm
Weight	118Kg
Cell chemistry	LiFePO4
Cooling method	Fan cooling

Battery cluster specification

Energy code	BS96	BS112	BS128	BS144	BS160	BS176	BS192	BS208R	BS225	BS241
Module Number	6	7	8	9	10	11	12	13	14	15
Weight(kg)	733	851	969	1102	1220	1338	1456	1574	1692	1810
Dimension(W/H/D)mm										



Norminal capacity	314Ah
Norminal Energy/KWh	16.076n (n=Module Number)
Norminal Voltage/V	51.2n (n=Module Number)
Voltage Range/V	44.8n~57.6n (n=Module Number)
Recommended charge&discharge current	157A(0.5C)
Max. charge&discharge current	204A(0.65C)
Depth of discharge	90%
Cycle life	≥6000 cycles
Charging temperature range	0°C~55°C
Disharging temperature range	-20°C~55°C
Communication	CAN/RS485
Protection grade	IP20
Fire extinguishing system	Aerosol
Installation method	Stacked installation
Cooling method	Smart air cooling
Max. altitude	3000m

Certificate

CE,CB,UL.UN38.3,IEC62619,MSDS,ROHS

EnerLog

Data logger for overall system monitoring collects operation data from different units via Modbus RS485 and communicates with the ATESS server via Ethernet.

Features

- Up to 60 devices connection
- Support external sensors to realize the zero-export function
- Multi-function and high performance
- Local web server for easy configuration

EnerLog

Hardware Parameters	
Power adapter	Input: 100-240V, 50/60Hz AC Output 12V(+/-15%), 1A DC
Power consumption	2.5W

Application Parameters	
Max. communication range	500m
Communication with inverters	RS485
Communication with server	TCP(Modbus TCP protocol)
Support network	Ethernet
Data transfer interval	5 Minutes
Default server URL	ess-server.atesspower.com

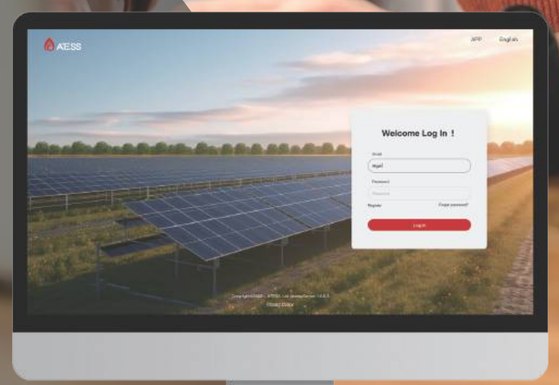
General Information	
Dimension(W/H/D)	175/105/31mm
Weight	320g
Language	Chinese, English
Mounting	Wall-mounted
Operating temperature	-30°C~+60°C
Degree of protection	IP30
Warranty	1 year
Certificate	CE

EnerClo

ATESS monitoring cloud platform for different applications including residential, commercial, and utility grade on/off grid solar storage systems.

Features

- Quick and easy overview
- Professional analysis
- PC and mobile phone accessible
- Real-time monitoring
- Detail report downloadable
- Online control and maintenance



EnerClo

Languages	
Available languages	Chinese, English, French, Greek, German, Nederlands, Italian, Japanese, Polish, Portuguese, Spanish, Turkish, Vietnamese, Korean

System Requirments	
Supported operating systems	All
Recommended browsers	Internet explore 8, Firefox 5, Google chrome 14, Safari 5, Opera 11
Supported data logger	EnerLog

Access	
Website	www.enerclo-atesspower.com

Plant Information	
Plant overview	Quick yield overview of all your PV plants
Specified plant	All important data at a glance including energy output, yield gains, environment status
Plant installation data	Summary of all plant information which contains installation data, location data and other key devices
Device overview	Display of all important data about data logger, environment monitor and other key devices
Time period	5 mins

Plant Management	
Account	User could manage all PV plants with one same account

Monitoring	
Inverter status	All inverter running status are recorded automatically, the warning of fault is highlighted immediately

Status Reporting	
Event reports	Timely e-mail reports on system fault and plant error

Background Operating	
Plant management	Add new plant, edit and delete existing plant
Device management	Intuitive operation to manage all devices
Inverter setting	Simple parameters setting for inverters including power management

Enerview Pro

Mobile phone app available on both IOS and Android to access EnerClo for online monitoring and maintenance

Features

- Quick and easy overview
- Professional analysis
- PC and mobile phone accessible
- Real-time monitoring
- Detail report downloadable
- Online control and maintenance

Enerview Pro

General Data	
Available languages	English, Chinese
Supported operating systems	Android/iOS
Recommended browsers	All
Source of data	ess-server.atesspower.com
Supported data logger	EnerLog

Plant Information	
Plant overview	Quick yield overview of all your PV plants
Specified plant	All important data at a glance including energy output, yield gains, environment status
Device overview	Display of all important data about the data logger, environment monitor, and other key devices
Plant event log	Display of all the warning events of the plant

Device Information	
Inverter status	All inverters' running status is recorded automatically, and the warning of fault is highlighted immediately
Event reports	Timely e-mail reports on system fault and plant error
Plant management	Add a new plant, edit and delete the existing plant
Device management	intuitive operation to manage all devices
Inverter setting	Simple parameters setting for inverters including power management

Hybrid power station for factory

Location: Thailand
Capacity: 2.5MW / 2.5MWh
Product: PCS500

Asia

Backup power system for university

Location: The Philippines
Capacity: 240kW / 240kWh
Product: HPS120-US, BR100T

Twin containerized power plant

Location: Singapore
Capacity: 300kW / 318kWh
Product: HPS150, BR129R

Micro system for village

Location: Myanmar
Capacity: 100kW / 200kWh
Product: HPS100, BR100T

Backup power system for gas station

Location: Iraq
Capacity: 250kW / 238kWh
Product: HPS100, BR75T

America

PV plant for brazilian military

Location: Brazil
Capacity: 100kW / 253kWh
Product: HPS50

Caymanas park off-grid solar plant

Location: Jamaica
Capacity: 1.7MW / 5MWh
Product: PCS100, PCS500, HPS100, BR100T, BR145T

Microgrid system for amazon village

Location: Peru
Capacity: 540kW / 1666.56kWh
Product: HPS150, HPS120

Africa

Off-grid power plant for farm irrigation

Location: South Africa
Capacity: 1.5MW / 2.8MWh
Product: PCS500

Power station for beverage factory

Location: South Africa
Capacity: 1.5MW / 3MWh
Product: PCS500

Hybrid power station on rooftop

Location: South Africa
Capacity: 60kW / 100kWh
Product: HPS30

Load-shedding application

Location: South Africa
Capacity: 750kW / 1.5MWh
Product: PCS250

Hybrid power station for factory

Location: South Africa
Capacity: 1MW / 1.3MWh
Product: PCS500

Food factory project

Location: Greece
Capacity: 500kW / 1MWh
Product: PCS500

Europe

Asparagus processing factory

Location: Germany
Capacity: 450kW / 464kWh
Product: HPS150

Hybrid power plant

Location: Poland
Capacity: 250kW / 500kWh
Product: HPS50, BR100T