Hybrid Storage Inverter
3-6 kW

The Afore HNS Storage Series bi-directional energy storage inverter can be used for both on-grid and off-grid PV systems.

The storage inverter increases energy independence for homeowners. To optimize self-consumption, the battery automatically charged and discharged on the basis of customized setting. Significantly reduce the amount of energy purchased from public grid.

Communication implements via the Wi-Fi module (Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP, no additional software required.

ANTI-FLOW
Anti-Feed-in Function

UPS FUNCTION
Switch Time < 10ms

3-STAGES
Smart Charging

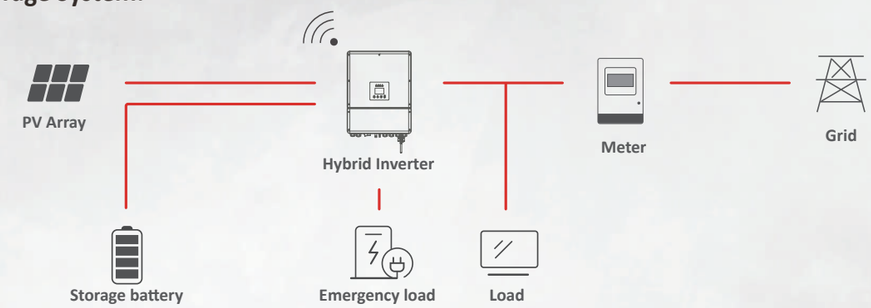
PROTECTION
Multiple Intelligent Protections

CONFIGURATION
Quick & Easy Config. via Wi-Fi

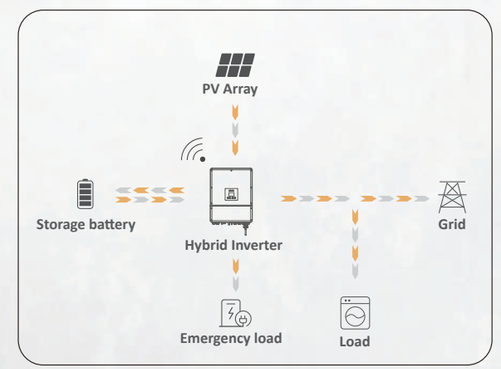
IP 65
IP 65 Water-resistant & Dustproof

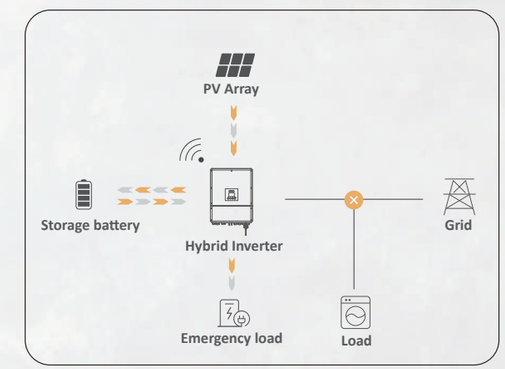
- Plug & Play, Easy Maintenance
- Compact Size & Easy installation
- No Fan Design
- Time base Charging & Discharging Setting

For New Storage System:



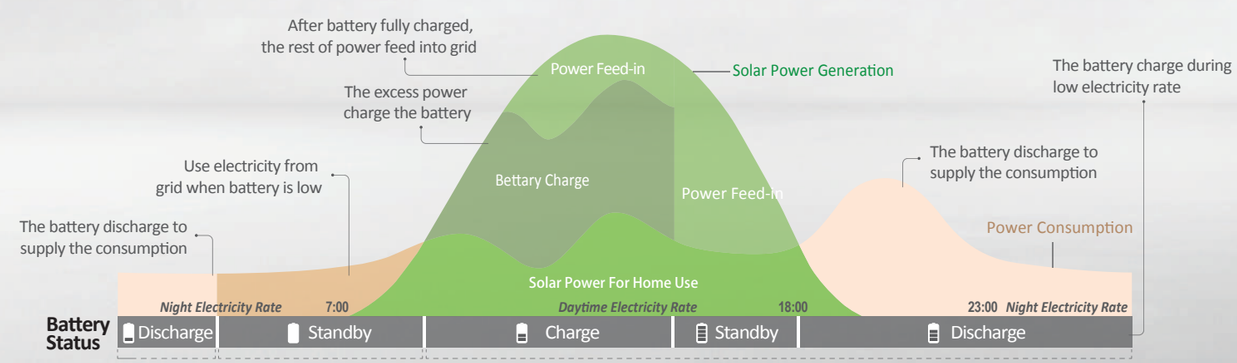
Optimizing Self-Consumption (on-grid) + Emergency Power Supply(off-grid)





Optimizing Self-Consumption Mode

With home energy storage installed, home owners may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



Solar Input	HNS3000HS	HNS3600HS	HNS4000HS	HNS4600HS	HNS5000HS	HNS5500HS	HNS6000HS
Max. DC Input Power (W)	6600	8000	8000	10000	10000	10000	10000
Rated DC Input Voltage (V)	360						
DC Input Voltage Range (V)	60-580						
MPPT Voltage Range (V)	50-550						
Start-up Voltage (V)	60						
Max. DC Input Current (A)	20 x 2						
Nr. of MPPT Tracker	2						
Storage Battery	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
Battery Nominal Voltage (V)	48						
Battery Voltage Range (V)	40-60						
Max. Charge/Discharge Current (A)	66						
Max. Charge/Discharge Power (W)	3600						
Charging Curve	3 Stages						
Compatible Battery Type	Lithium-ion,Lead-Acid etc.						
Emergency Power Supply(EPS Mode)	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
EPS Nominal Output Power (W)	3000						
EPS Nominal Output Voltage (V)	230						
EPS Nominal Output Frequency (Hz)	50/60						
EPS Nominal Output Current (A)	13						
Peak Output Power	3600w,30s						
THD(Voltage)	<5%						
Switching Time (s)	<0.01						
AC Output	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
Nominal AC Output Power (VA)	3000	3600	4000	4600	5000	5500	6000
Nominal AC Output Current (A)	13	16	17.5	20	22	24	26
Max. AC Output Current (A)	15	18.5	20	23	25.5	27.5	30
Nominal AC Voltage (V)	230						
Nominal AC Frenquency (Hz)	50 / 60						
Power Factor	Adjustable 0.9 overexcited to 0.9 underexcited						
THD(Current)	<3%						
Efficiency	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
Europe Efficiency	97.5%						
Max. Efficiency	97.9%						
Battery Charge/Discharge Efficiency	94.6%						
Protection	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
Reverse Polarity Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Over Current/Voltage Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AC Short-ciruit Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leakage Current Detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Grid Monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enclosure Protect Level	IP65 / NEMA4X						
General Data	**HNS3000HS**	**HNS3600HS**	**HNS4000HS**	**HNS4600HS**	**HNS5000HS**	**HNS5500HS**	**HNS6000HS**
Dimensions [W/H/D] (mm)	450 / 597 / 176						
Weight (kg)	23						
Topology	Tranformerless(solar), HF(Battery)						
Cooling Concept	Natural Convection						
Relatively Humidity	0-100%						
Operating Temperature Range (°C)	-25~60						
Operating Altitude (m)	< 2000						
Noise Emission (dB)	< 25						
Standby Consumption (W)	< 5						
Display & Communication Interfaces	LCD, LED, RS485, Wi-Fi, CAN						
Certification & Approvals	AS 4777, VDE-AR-N4105, VDE0126, G98, G99, IEC62109-1-2, IEC62040, EN61000-6-2, EN61000-6-2, EN61000-6-3, NRS097-2-1:2017						

Solar Input	HNS3000HS-HV	HNS3600HS-HV	HNS4000HS-HV	HNS4600HS-HV	HNS5000HS-HV	HNS5500HS-HV	HNS6000HS-HV
Max. DC Input Power (W)	6600	8000	8000	10000	10000	10000	10000
Rated DC Input Voltage (V)	360						
DC Input Voltage Range (V)	60-580						
MPPT Voltage Range (V)	50-550						
Start-up Voltage (V)	60						
Max. DC Input Current (A)	20 x 2						
Nr. of MPPT Tracker	2						
Storage Battery	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
Battery Nominal Voltage (V)	300						
Battery Voltage Range (V)	85-400						
Max. Charge/Discharge Current (A)	30						
Max. Charge/Discharge Power (W)	3600	4250	4600	5300	5800	6300	6900
Charging Curve	3 Stages						
Compatible Battery Type	Lithium-ion,Lead-Acid etc.						
Emergency Power Supply(EPS Mode)	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
EPS Nominal Output Power (W)	3000	3600	4000	4600	5000	5500	6000
EPS Nominal Output Voltage (V)	230						
EPS Nominal Output Frequency (Hz)	50/60						
EPS Nominal Output Current (A)	13	16	17.5	20	22	24	26
Peak Output Power	3600w,30s	4250w,30s	4600w,30s	5300w,30s	5800w,30s	6300w,30s	6900w,30s
THD(Voltage)	<5%						
Switching Time (s)	<0.01						
AC Output	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
Nominal AC Output Power (VA)	3000	3600	4000	4600	5000	5500	6000
Nominal AC Output Current (A)	13	16	17.5	20	22	24	26
Max. AC Output Current (A)	15	18.5	20	23	25.5	27.5	30
Nominal AC Voltage (V)	230						
Nominal AC Frenquency (Hz)	50 / 60						
Power Factor	Adjustable 0.9 overexcited to 0.9 underexcited						
THD(Current)	<3%						
Efficiency	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
Europe Efficiency	97.5%						
Max. Efficiency	97.9%						
Battery Charge/Discharge Efficiency	98.6%						
Protection	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
Reverse Polarity Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Over Current/Voltage Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anti-islanding Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AC Short-ciruit Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leakage Current Detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground Fault Monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Grid Monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enclosure Protect Level	IP65 / NEMA4X						
General Data	**HNS3000HS-HV**	**HNS3600HS-HV**	**HNS4000HS-HV**	**HNS4600HS-HV**	**HNS5000HS-HV**	**HNS5500HS-HV**	**HNS6000HS-HV**
Dimensions [W/H/D] (mm)	450 / 597 / 176						
Weight (kg)	22.5						
Topology	Tranformerless(solar)						
Cooling Concept	Natural Convection						
Relatively Humidity	0-100%						
Operating Temperature Range (°C)	-25~60						
Operating Altitude (m)	< 2000						
Noise Emission (dB)	< 25						
Standby Consumption (W)	< 5						
Display & Communication Interfaces	LCD, LED, RS485, Wi-Fi, CAN						
Certification & Approvals	AS 4777, VDE-AR-N4105, VDE0126, G98, G99, IEC62109-1-2, IEC62040, EN61000-6-2, EN61000-6-2, EN61000-6-3, NRS097-2-1:2017						

Battery Bank
& All-in-one Solution

10 Years Lifetime | BMS Build-in | Modular Expansion | LiFePO4

	Battery Bank
Capacity Energy (kWh)	2.8
Capacity (Ah)	55
Suggested SOC	10% - 95%
Usable Capacity (kWh)	2.4
Nominal Voltage (V)	51.2
Operation Voltage (V)	46.4 - 57.6
Maximum Charging/ Discharging Current (A)	70 / 70
Installation	Indoor and Outdoor
Life Cycling (0.5C 25℃)	5000 cycles
Operation Temperature (℃)	0 ~ 45
Storage Temperature (℃)	-20 ~ 45
Weight (Kg)	28
Dimensions (mm)	420 x 420 x 207
Communication	RS485, Bluetooth optional
Certifications	MSDS, UN38.3, RoHS, IEC62619, UL