

GROWATT

**Energy
Matrix**



Haitai Solar



SPH 4000~10000TL3 BH-UP

- 100% three-phase imbalance output
- Smart phase-level power export limitation
- Wide battery voltage 100-550V
- UPS function, 10ms transition
- Scalable system configuration
- VPP interface ready
- DC/AC type II SPD
- 1.5 DC/AC Ratio



GROWATT

P O W E R
- I N G
T O M O R R O W

Datasheet	SPH 4000TL3 BH-UP	SPH 5000TL3 BH-UP	SPH 6000TL3 BH-UP	SPH 7000TL3 BH-UP	SPH 8000TL3 BH-UP	SPH 10000TL3 BH-UP
Input data(PV)						
Max. recommended PV power (for module STC)	6000W	7500W	9000W	10500W	12000W	15000W
Max. DC voltage	1000					
Start voltage	120V					
MPP voltage range	120V-1000V/600V					
No. of MPP trackers	2					
No. of PV strings per MPP tracker	1					
Max. input current per MPP tracker	13.5A					
Max. short-circuit current per MPP tracker	16.9A					
Output data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage (range*)	230V/400V (310~476V)					
AC grid frequency (range)	50Hz/60Hz (45Hz-55Hz/55Hz-65Hz)					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Adjustable power factor	0.8leading...0.8lagging					
THDi	<3%					
AC grid connection type	3W+N+PE					
Battery data (DC)						
Battery voltage range	100~550V					
Max charging and discharging current	25A					
Continuous charging and discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	Lithium battery					
Backup power(AC)						
Max. AC output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Nominal AC output voltage	230V/400V					
Nominal AC output frequency	50/60HZ					
THDv	<3%					
Switch time	<10ms					
Efficiency						
MAX. efficiency	97.6%	97.8%	98.0%	98.2%	98.2%	98.2%
European efficiency	97.0%	97.2%	97.3%	97.4%	97.4%	97.5%
Protection devices						
DC switch	Yes					
DC reverse polarity protection	Yes					
AC/DC surge protection	Type II					
Battery reverse protection	Yes					
AC short-circuit protection	Yes					
Ground fault monitoring	Yes					
Grid monitoring	Yes					
Anti-islanding protection	Yes					
Residual-current monitoring unit	Yes					
Insulation resistance monitoring	Yes					
General data						
Dimensions (W / H / D)	505/453/198mm					
Weight	30kg					
Operating temperature range	-25 °C ... +60 °C					
Nighttime power consumption	<13W					
Topology	Transformerless					
Cooling	Natural					
Protection degree	IP65					
Relative humidity	0~100%					
Altitude	3000m					
DC connection	H4 / MC4 (Optional)					
AC connection	Connector					
Display	LCD+LED					
Interfaces: RS485/CAN/USB	Yes					
Monitor : RF/WIFI/GPRS	Optional					
Warranty: 5 years / 10 years	Yes / Optional					
CE, IEC62109, IEC 62040, VDE-AR-N 4105, VDE 0126, UTE C 15-712, C10/C11 , EN50549, CEI 0-21, CEI 0-16, IEC62116, IEC61727, AS/NZS 4777 , G98, TOR Erzeuger						

* The AC Voltage Range may vary depending on specific country grid standard.

High-voltage Stacked Battery Pack

HTDESS HP 2.56 D1/HTDESS HP 5.12 D1

- ◆ This high-voltage battery features smaller and lighter individual modules, requiring simple and straightforward installation steps, enabling easy customization of battery combinations to meet your energy storage needs.
- ◆ With a reliable BMS system and high-performance balancing technology, the entire system achieves intelligence and flexibility, providing you with a more stable discharge platform.



ultra-large capacity



expandable modules



outstanding performance



safe and reliable



real-time monitoring



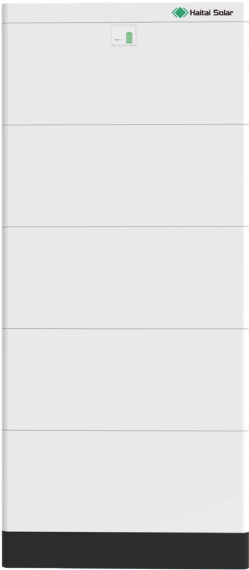
high voltage



Smart Battery Management System



integrated photovoltaic energy storage



Model	HTDESS HP 2.56 D2
Rated voltage (Vdc)	51.2
Rated capacity (Wh)	2560
Working voltage range (Vdc)	129.6-516.6
Charging voltage (Vdc)	58.4
Rated charging/discharging current (A)	25
Max. charging/discharging current (A)	50
Number of units in parallel	<10pcs
Cycle life	10000@80% DOD,25°C /0.5C
Structure	
High-voltage box dimensions (mm)/weight (kg)	600×210×250/14
Battery cabinet dimensions (mm)/weight (kg)	600×210×180/24
Pedestal (mm)/weight (kg)	610×210×90/7
Protection grade	IP65
Type of mounting	Stacking type
Work environment	
Charging temperature °C	0~55
Discharging temperature °C	-20~55
Latitude M	<2500
Relative temperature (RH)	5~95%(W/O condensing)
Communication	
communication interface	RS485 CAN
Display	LED indicator shows the remaining power
Warranty	5 Year Product Warranty 10 Year Performance Warranty

