

# SPH 4000~10000TL3 BH

- IP65 & Natural cooling
- 3-Phase and Battery Ready
- Programmable working modes
- Compatible with high-voltage battery
- Online Smart Service



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



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Datasheet	SPH 4000TL3 BH	SPH 5000TL3 BH	SPH 6000TL3 BH	SPH 7000TL3 BH	SPH 8000TL3 BH	SPH 10000TL3 BH
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### Input data(DC)

Max. recommended PV power (for module STC)	5200W	6500W	7800W	9100W	10400W	13000W
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Start Voltage	160V	160V	160V	160V	160V	160V
MPP voltage range / normal voltage	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V
Max. input current per MPP trackers	12A/12A	12A/12A	12A/12A	12A/12A	12A/12A	12A/12A
Max. short-circuit current per MPP trackers	15A/15A	15A/15A	15A/15A	15A/15A	15A/15A	15A/15A
Number of MPP trackers/ strings per MPP tracker	2/1	2/1	2/1	2/1	2/1	2/1

### Output data(AC)

AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Nominal AC voltage/range	230V/400V; 310~476V	230V/400V; 310~476V	230V/400V; 310~476V	230V/400V; 310~476V	230V/400V; 310~476V	230V/400V; 310~476V
AC grid frequency/range	50/60Hz; 45~55Hz/55~65 Hz	50/60Hz; 45~55Hz/55~65 Hz	50/60Hz; 45~55Hz/55~65 Hz	50/60Hz; 45~55Hz/55~65 Hz	50/60Hz; 45~55Hz/55~65 Hz	50/60Hz; 45~55Hz/55~65 Hz
Power factor(@nominal power)	1	1	1	1	1	1
Adjustable power factor	0.8leading...0.8lagging	0.8leading...0.8lagging	0.8leading...0.8lagging	0.8leading...0.8lagging	0.8leading...0.8lagging	0.8leading...0.8lagging
THDi	<3%	<3%	<3%	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE

### Stand alone(AC power)

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	230V/400V	230V/400V	230V/400V	230V/400V	230V/400V
Nominal AC output frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THDv	<3%	<3%	<3%	<3%	<3%	<3%
Switch time	<0.5S	<0.5S	<0.5S	<0.5S	<0.5S	<0.5S

### Battery data (DC)

Battery voltage range	160~550V	160~550V	160~550V	160~550V	160~550V	160~550V
Max charging and discharging current	25A	25A	25A	25A	25A	25A
Continuous charging and discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	Lithium / Lead-acid battery	Lithium / Lead-acid battery	Lithium / Lead-acid battery	Lithium / Lead-acid battery	Lithium / Lead-acid battery	Lithium / Lead-acid battery
Capacity of battery	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh

### Efficiency

Max. efficiency	97.6%	97.8%	98.0%	98.2%	98.2%	98.2%
Euro European efficiency	97.0%	97.2%	97.3%	97.4%	97.4%	97.5%
Battery charge/discharge efficiency	97.4%	97.4%	97.4%	97.4%	97.4%	97.4%

### Protection devices

DC switch	yes	yes	yes	yes	yes	yes
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
DC Surge protection	Type II	Type II	Type II	Type II	Type II	Type II
Battery reverse protection	yes	yes	yes	yes	yes	yes
AC short circuit protection	yes	yes	yes	yes	yes	yes
AC Surge protection	Type II	Type II	Type II	Type II	Type II	Type II
Ground fault monitoring	yes	yes	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes	yes	yes
Anti-islanding protection	yes	yes	yes	yes	yes	yes
Residual-current monitoring unit	yes	yes	yes	yes	yes	yes
Insulation resistance monitoring	yes	yes	yes	yes	yes	yes

### General data

Dimensions (W / H / D)	505*453*198mm	505*453*198mm	505*453*198mm	505*453*198mm	505*453*198mm	505*453*198mm
Weight	28kg	28kg	28kg	28kg	28kg	28kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)
Altitude	3000m	3000m	3000m	3000m	3000m	3000m
Self-consumption night	<13W	<13W	<13W	<13W	<13W	<13W
Topology	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65	IP65	IP65	IP65
Relative humidity	0...100%	0...100%	0...100%	0...100%	0...100%	0...100%

### Features

DC connection	H4 / MC4 (opt )	H4 / MC4 (opt )	H4 / MC4 (opt )	H4 / MC4 (opt )	H4 / MC4 (opt )	H4 / MC4 (opt )
AC connection	Cable gland+OT terminal	Cable gland+OT terminal	Cable gland+OT terminal	Cable gland+OT terminal	Cable gland+OT terminal	Cable gland+OT terminal
Display	LCD+LED	LCD+LED	LCD+LED	LCD+LED	LCD+LED	LCD+LED
RS232/RS485/CAN/USB	yes	yes	yes	yes	yes	yes
RF/WIFI/GPRS/4G	opt	opt	opt	opt	opt	opt
Warranty: 5 years /10 years	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt

IEC 61000, IEC 62109, IEC 62040, VDE-AR-N 4105, VDE 0126, UTE C 15-712, EN50549, TR3.2.1, TR3.3.1, CEI 0-21, IEC62116, IEC61727, AS/NZS 4777, G98, IEC 62477

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