

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



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| Datasheet | SPH 4000TL3 BH | SPH 5000TL3 BH | SPH 6000TL3 BH | SPH 7000TL3 BH | SPH 8000TL3 BH | SPH 10000TL3 BH |
|-----------|----------------|----------------|----------------|----------------|----------------|-----------------|
|-----------|----------------|----------------|----------------|----------------|----------------|-----------------|

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 | 100~550V | 100~550V | 100~550V | 100~550V | 100~550V | 100~550V |
| 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 battery | lithium battery | lithium battery | lithium battery | lithium battery | lithium 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) in mm | 505/453/198 | 505/453/198 | 505/453/198 | 505/453/198 | 505/453/198 | 505/453/198 |
| 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, C10/11