

# SPH 10000TL-HU-US

- UPS function, 10ms transition
- 1.5 DC/AC Ratio with 3 Mppts
- Up to 200A charging/discharging current
- Support DC-coupled, AC-coupled, AC-retrofit applications
- Type II Surge protection for DC and AC sides
- Support charge from diesel generator
- Support up to 6 units in parallel
- Support form a 220V or 208V three-phase system



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

| Datasheet  |  | SPH 10000TL- HU-US   |
|--|--|--|
| <b>Input data (DC)</b>   |  |  |
| Max. recommended PV power (for module STC)   |  | 15000W   |
| Max. input power for single MPPT   |  | 10000W   |
| Max. DC voltage  |  | 525V   |
| Startup voltage  |  | 150V   |
| MPP voltage range  |  | 150V-450V/370V   |
| No. of MPP trackers  |  | 3  |
| No. of PV strings per MPP tracker  |  | 2  |
| Max. input current per MPP tracker   |  | 22A  |
| Max. short-circuit current per MPP tracker   |  | 27A  |
| <b>AC input data (AC)</b>  |  |  |
| Nominal AC input power   |  | 10000W   |
| Nominal input voltage  |  | 240V   |
| Nominal input current  |  | 41.67A   |
| <b>Output data (AC)</b>  |  |  |
| AC nominal power   |  | 10000W   |
| Max. AC apparent power   |  | 10000VA  |
| Nominal AC voltage (range*)  |  | 120V/208V, 120V/240V Split (180Vac - 280Vac)                   |
| AC grid frequency (range*)   |  | 50Hz/60Hz  |
| Max. output current  |  | 50A  |
| Adjustable power factor  |  | 1.0leading...1.0lagging  |
| THDi   |  | <3%  |
| AC grid connection type  |  | L1/L2/N/PE   |
| <b>Battery data (DC)</b>   |  |  |
| Battery voltage range  |  | 40~60V   |
| Max charging and discharging current   |  | 200A   |
| Continuous charging and discharging power  |  | 10000W   |
| Communication protocol   |  | CAN/RS485  |
| Type of battery  |  | Lithium /Lead-acid   |
| <b>Backup power (AC)</b>   |  |  |
| AC nominal output power  |  | 10000W   |
| Nominal AC output voltage  |  | 120/208V, 120V/240V Split                                      |
| Nominal AC output frequency  |  | 50/60Hz  |
| Switch time  |  | <10ms  |
| Overload capability  |  | 13000W for 5 s   |
| <b>Efficiency</b>  |  |  |
| Peak efficiency  |  | 97.50%   |
| CEC weighted efficiency  |  | 97%  |
| MPPT efficiency  |  | ≥99.5%   |
| <b>Protection devices</b>  |  |  |
| PV switch  |  | Yes  |
| AC over current protection   |  | Yes  |
| AC over voltage protection   |  | Yes  |
| Ground fault monitoring  |  | Yes  |
| Grid monitoring  |  | Yes  |
| Anti-islanding protection  |  | Yes  |
| Residual-current monitoring unit   |  | Yes  |
| Insulation resistance monitoring   |  | Yes  |
| AFCI Protection  |  | Yes  |
| Surge protection   |  | DC Type II/AC Type II  |
| <b>General data</b>  |  |  |
| Dimensions (W / H / D)   |  | 440/855/256mm (17.32/28.34/9.44) inches                        |
| Weight   |  | 48.84kg/107.8lbs   |
| Operating temperature range  |  | -25°C ... +60°C (-13...+140°F) with derating above 45°C /113°F |
| Noise emission (typical)   |  | ≤ 30 dB(A)   |
| Max. grid passthrough current  |  | 62.5A  |
| Max. generator input power   |  | 10000W   |
| Max stackable number   |  | 6  |
| RSD transmitter  |  | Tigo/APsmart   |
| Self-consumption   |  | < 60 W   |
| Topology   |  | Transformerless  |
| Cooling  |  | Smart cooling  |
| Protection degree  |  | IP65/NEMA 4  |
| Relative humidity  |  | 0~100%   |
| Altitude   |  | 2000m  |
| DC connection  |  | Quick connector  |
| Display  |  | LCD  |
| Interfaces: RS485/CAN/USB  |  | Yes  |
| Communication  |  | WIFI/4G cellular (Opt)   |
| Warranty   |  | 10 years   |
| IEEE1547, CA RULE21, RULE14(HECO Compliant), UL1741, UL1741SA/SB, CSA C22.2, PREPA, UL1699B, UL1741 CRD, IEC62109-1, IEC62109-2, FCC Part15 Class B, Sunspec |  |  |

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# Approved Battery List

**Version:** Growatt-LV48-0007

**Date issued:** 2025/1/19

**Issued by:** ShenZhen Growatt New Energy Co.,Ltd.

We Growatt hereby declares that these inverter models are compatible with below brand batteries.

**Issued by:** Daisy Xiao

## **Inverter models:**

SPM 3-6kTL-HU, SPM 8-10kTL-HU, SPH 8-10kTL-HU-US(B), SPH 10000TL-HU, SPH 10000TL-HU-US will be abbreviated as SPH/SPM in the following.

SPE 8000-12000 ES, SPE 3.5-6KTL HVM-G2, SPE 6000-12000 US will be abbreviated as SPE in the following.

SPF 6000ES Plus, SPF 3-5k ES, SPF 3.5-5k ES Lite, SPF 2-5kTL HVM, SPF 3000TL LVM, SPF 3.5-5kTL HVM-Pro, SPF 4-12kT HVM, SPF 4-12kT DVM, SPF 4-18kT DVM-MPV will be abbreviated as SPF in the following.

WIT 4-15k-HU will be abbreviated as WIT in the following.

## Battery list:

| Battery       |  | Inverter       |              |                |
|---------------|--|----------------|--------------|----------------|
| Battery Brand | Battery Model  | Inverter Model | RS485 or CAN | Inverter Setup |
| Growatt       | Hope 5.5L-A1,Hope 5.0L-B1  | SPH/SPM HU     | RS485        | 00             |
|               |  | SPE, SPF       |              | L01            |
|               | ALP 5.0L-E2-US, ALP 5.0L-E1, AXE 5.0L - C1<br>Hope 5.5L-A1,Hope 5.0L-B1, Hope 14.3L-A1   | SPH/SPM HU     | CAN          | 01             |
|               |  | SPE, SPF       |              | L51            |
|               |  | WIT            |              | √              |
| Sacolar       | STR 5.5-A1   | SPH/SPM HU     | CAN          | 01             |
|               |  | SPE, SPF       |              | L51            |
|               |  | WIT            |              | √              |
|               |  | SPH/SPM HU     | RS485        | 00             |
|               |  | SPE, SPF       |              | L01            |
| Energysys     | OGHB 1548-Li   | SPH/SPM HU     | CAN          | 02             |
| Topband       | TB48100F-T110AD  | SPH/SPM HU     | RS485        | 03             |
|               |  | SPE, SPF       |              | L01            |
| PYLON         | US2000B,US3000, US2000C, US3000C, Pelio-L<br>UP5000, US5000, Force L1, Force L2, UF5000  | SPH/SPM HU     | CAN          | 04             |
|               |  | SPE, SPF       |              | L52            |
| Dyress        | DL2.5, DL3.6, DL5.0, DL5.0C, DL5.0e, DL5.0X;<br>Powerbox G2, PowerBrick, Powerbox Pro, PowerDepot H5B;<br>B4850, B3, A48100, B51100, BX51100 | SPH/SPM HU     | CAN          | 01             |
|               |  | SPE, SPF       |              | L51            |
|               |  | WIT            |              | √              |
|               |  | SPH/SPM HU     | RS485        | 00             |
|               |  | SPE, SPF       |              | L01            |
| PYTES         | V5°, E-BOX-48100R  | SPH/SPM HU     | CAN          | 01             |
|               |  | SPE, SPF       |              | L51            |
|               |  | WIT            |              | √              |
|               |  | SPH/SPM HU     | RS485        | 00             |
|               |  | SPE, SPF       |              | L01            |

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|                   |   |            |     |     |
|-------------------|---|------------|-----|-----|
| Raystech          | RT5427, RT10854, RT5000 LM,<br>RT5000 B, RT5427-LV-RACK, RT5120M  | SPH/SPM HU | CAN | 01  |
|                   |   | SPE, SPF   |     | L51 |
|                   |   | WIT        |     | ✓   |
| EG4               | EG4-LL, SR-48-100-LP4-IN-02,<br>WM-48-100-IN-00, WP-16/280-1AWLL,<br>WM-48 280-LL-00, WM-48-280-1-IN-LL-00  | SPH/SPM HU | CAN | 01  |
|                   |   | SPE, SPF   |     | L51 |
|                   |   | WIT        |     | ✓   |
| Zetara            | ZLES5000R, ZRLVESS5KR, ZRLVESS10KR, ZRLVESS5KR-LP,<br>ZRLVESS5KR-V3, ZLES5000W, ZRLVESS5KW-SC,<br>ZRLVESS10KW, ZRLVESS14.3KW, ZRLVESS14.3KW-OD,<br>ZRLVESS5KHS, ZRLVESS5KVS | SPH/SPM HU | CAN | 01  |
|                   |   | SPE, SPF   |     | L51 |
|                   |   | WIT        |     | ✓   |
| Soluna            | Soluna EOS 5K Pack<br>Soluna EVO 5K Pack<br>Soluna 10K Pack LV<br>Soluna Franz 9.6K Pack LV   | SPH/SPM HU | CAN | 01  |
|                   |   | SPE, SPF   |     | L51 |
|                   |   | WIT        |     | ✓   |
| CF Energy         | CFE-5100, CFE-5100S,<br>CFE-2400, CFE-10H,<br>CFE-5, CFE-WL10,<br>CFE-WL15  | SPH/SPM HU | CAN | 01  |
|                   |   | SPE, SPF   |     | L51 |
|                   |   | WIT        |     | ✓   |
| Briggs & Stratton | SPHI-6.6-L0<br>SPHI-13.2-L0<br>SPHI-19.8-L0<br>SPHI-6.6-L0-C<br>SPHI-13.2-L0-C<br>SPHI-19.8-L0-C  | SPH/SPM HU | CAN | 04  |
|                   |   | SPE, SPF   |     | L52 |

### Growatt battery partners that support closed-loop communications

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**Note:**

1. Please set Battery Mode to Lithium and set the Lithium Mode according to the inverter set up above.
2. The purchaser should confirm with the battery supplier if the battery is compatible with Growatt inverter, or Growatt will not be liable for any failure that caused by communication issue.
3. Kindly reach out to the email address provided below if you are seeking compatibility with Growatt Inverters and wish to have your battery added to the approved list.

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