

# Hybrid Microinverter

TSOL-MH2000



Hybrid Microinverter is one key components of the plug and play storage system which designed for end-users.

Hybrid Microinverter, which is connected between solar modules and battery, can charge excess electrical energy into the battery and release it when needed.



Charge Battery from Module and Grid



Compatible with Various Types of Batteries



-20°C ~ +60°C Working Temperature



Built-in WiFi, Bluetooth APP Remote Monitoring



Zero Export (optional)

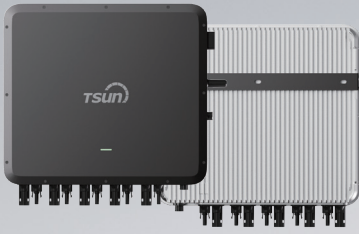


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## Technical Data

| Model                                 | TSOL-MH2000                               | TSOL-MH2000DE | TSOL-MH1000 | TSOL-MH1000DE |
|---------------------------------------|---|---------------|-------------|---------------|
| <b>PV Input(PV)</b>                   |   |               |             |               |
| Recommended Module Power [Wp]         | 300 ~ 700+                                | 300 ~ 700+    | 300 ~ 700+  | 300 ~ 700+    |
| Quantity of PV Module                 | 1 to 4                                    | 1 to 4        | 1 to 2      | 1 to 2        |
| Start up Voltage @Rated condition [V] | 22  | 22            | 22          | 22            |
| Operating Voltage Range per Input [V] | 16~60                                     | 16~60         | 16~60       | 16~60         |
| Max. Input Voltage per Input [V]      | 60  | 60            | 60          | 60            |
| Short Circuit Current per Input [A]   | 25  | 25            | 25          | 25            |
| Max. Input Current per Input [A]      | 18  | 18            | 18          | 18            |
| Quantity of MPPTs                     | 4   | 4             | 2           | 2             |
| Quantity of DC Inputs [MC4]           | 4   | 4             | 2           | 2             |
| <b>Battery (DC)</b>                   |   |               |             |               |
| Battery Capacity (Wh)                 | 2048                                      | 2048          | 2048        | 2048          |
| Battery Type                          | LiFePO4                                   | LiFePO4       | LiFePO4     | LiFePO4       |
| Nominal Voltage (V)                   | 51.2                                      | 51.2          | 51.2        | 51.2          |
| Operating Voltage Range (V)           | 43.2 - 58.4                               | 43.2 - 58.4   | 43.2 - 58.4 | 43.2 - 58.4   |
| Max. Discharge Power (W)              | 2000                                      | 2000          | 1000        | 1000          |
| Max. Discharge Current (A)            | 45  | 45            | 25          | 25            |
| Max. Charge Power (W)                 | 2000                                      | 2000          | 1000        | 1000          |
| Max. Charge Current (A)               | 40  | 40            | 20          | 20            |
| Max. System Capacity (kWh)            |   |               |             |               |
| <b>AC Port (On-grid)</b>              |   |               |             |               |
| Max AC Output Power (W)               | 2000                                      | 800           | 1000        | 800           |
| Max. AC Output Current (A)            | 10  | 8             | 5           | 4             |
| Max. AC Input Power (W)               | 2000                                      | 2000          | 1000        | 1000          |
| Max. AC Input Current (A)             | 11  | 11            | 5.5         | 5.5           |
| Max. AC Input Current (A)             | 220/230/240, L/N/PE                       |               |             |               |
| Nominal AC Frequency (Hz)             | 50/60                                     |               |             |               |
| Power Factor                          | >0.99 default 0.8 leading ... 0.8 lagging |               |             |               |
| THDI                                  | ≤3%@100% Load                             |               |             |               |
| <b>AC Port (Off-grid)</b>             |   |               |             |               |
| Max. AC Output Power (W)              | 2000                                      | 2000          | 1000        | 1000          |
| Max. AC Output Current (A)            | 10  | 10            | 5           | 5             |
| Nominal AC Voltage (V)                | 220/230/240, L/N/PE                       |               |             |               |
| Nominal AC Frequency (Hz)             | 50/60                                     |               |             |               |
| Switch Time [ms]                      | < 10                                      |               |             |               |
| Peak Output Apparent Power [VA]       | 150% 2s                                   |               |             |               |



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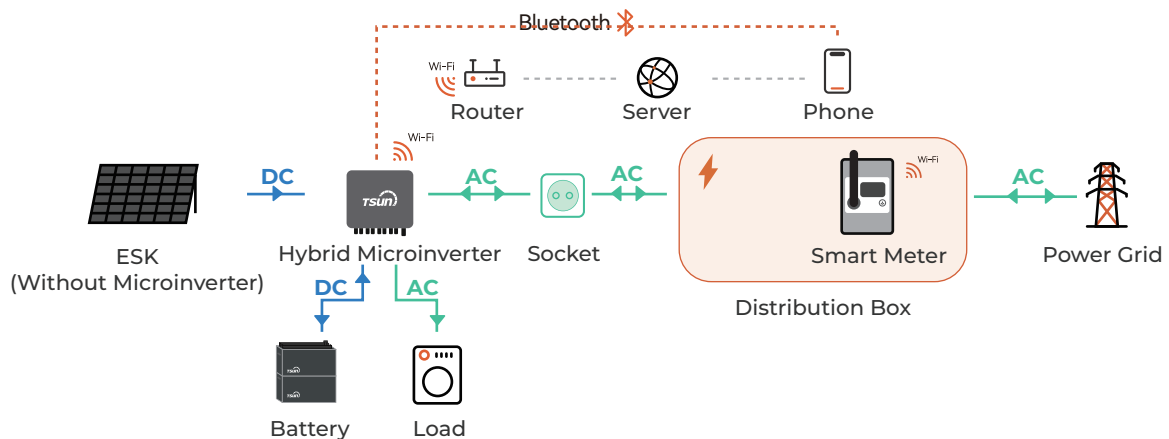
| Model  | TSOL-MSU2000 | TSOL-MSU2000DE | TSOL-MSU1000 | TSOL-MSU1000DE               |
|--|--------------|----------------|--------------|------------------------------|
| <b>Efficiency</b>                            |              |                |              |                              |
| Peak Inverter Efficiency                     |              |                |              | 97.0%                        |
| EU Efficiency                                |              |                |              | 96.7%                        |
| MPPT Efficiency                              |              |                |              | 99.9%                        |
| Battery Charge/Discharge Efficiency          |              |                |              | 95%/95%                      |
| <b>Mechanical Data</b>                       |              |                |              |                              |
| Dimensions (W×H×D mm)                        |              |                |              | 360 * 320 * 51               |
| Weight [kg]                                  |              |                |              | 8                            |
| <b>General Data</b>                          |              |                |              |                              |
| Communication                                |              |                |              | WiFi (Bluetooth) + 2 * RS485 |
| Ingress Protection                           |              |                |              | IP67                         |
| Cooling                                      |              |                |              | Natural convection           |
| Operating Ambient Temperature Range          |              |                |              | -40 ~ +65 °C                 |
| Relative Humidity                            |              |                |              | 0-95%, Non condensing        |
| Max. Operating Altitude Without Derating [m] |              |                |              | 2000                         |

## Diagram

Hybrid Microinverter is one key components of the plug and play storage system which designed for end-users.

Hybrid Microinverter, which is connected between solar modules and battery, can charge excess electrical energy into the battery and release it when needed.

This solution, Solar Module + Hybrid Microinverter+ Battery, is typically used as an energy storage solution for small household, conventional balconies, courtyards, family carports, and other micro systems.



For more information, visit/ contact us at [www.tsun-ess.com](http://www.tsun-ess.com)

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