

**INVERTERS**

# SPH-SPM 8000-10000TL-HU-HU2

Hybrid inverter · Single-phase · 8 – 10 kW · 5 models


**8 – 10** kW

RATED POWER

**Single-phase**

PHASE

**3**

MPPT TRACKERS

**97.5** %

MAX. EFFICIENCY

| Parameter                           | Unit | SPH 10000TL-HU             | SPM 8000TL-HU            | SPM 10000TL-HU            | SPM 8000TL-HU2 | SPM 10000TL-HU2 |
|-------------------------------------|------|----------------------------|--------------------------|---------------------------|----------------|-----------------|
| PV input                            |      |                            |                          |                           |                |                 |
| Max. PV input power                 | W    | 15000                      | 16000                    | 20000                     | 12800          | 16000           |
| Max. PV input voltage               | V    | 525                        | 600                      |                           | 550            |                 |
| Rated PV input voltage              | V    | 370                        |                          |                           | -              |                 |
| MPPT voltage range                  | V    | 150 – 450                  | 150 – 500                | 150 – 550                 | 80 – 525       |                 |
| Start-up voltage                    | V    | 150                        | 120                      |                           | 80             |                 |
| Max. input current per MPPT         | A    | 22                         | 16                       | 32                        |                |                 |
| Max. short-circuit current per MPPT | A    | 28                         | 22                       | 40                        | 48             |                 |
| Number of MPPT trackers             |      | 3                          |                          |                           | 2              |                 |
| PV strings per MPPT                 |      | 2                          | 1                        | 2                         |                |                 |
| Max. input power per MPPT           |      | 10000 W                    | 8000 W + 8000 W + 8000 W | 8000 W + 8000 W + 15000 W | -              |                 |
| Max. DC/AC ratio                    |      | 1.5                        | 2.0                      |                           | 1.6            |                 |
| AC output                           |      |                            |                          |                           |                |                 |
| Rated output power                  | W    | 10000                      | 8000                     | 9999                      | 8000           | 10000           |
| Max. apparent power                 | VA   | 10000                      | 8000                     | 9999                      | 8000           | 10000           |
| Rated AC voltage                    | V    | 230                        |                          |                           |                |                 |
| Phase                               |      | Single-phase               |                          |                           |                |                 |
| Rated AC frequency                  | Hz   | 50/60                      | 50                       |                           |                |                 |
| Max. AC output current              | A    | 50                         | 40                       | 50                        |                |                 |
| Total harmonic distortion (THDi)    | %    | <3                         |                          |                           |                |                 |
| Power factor                        |      | 0.8 leading to 0.8 lagging |                          |                           |                |                 |
| Nominal AC input power              | W    | 10000                      | 8000                     | 9999                      | 8000           | 10000           |
| Nominal AC input voltage            | V    | 230                        |                          |                           |                |                 |
| Nominal AC input current            | A    | 43.5                       | 34.8                     | 43.4                      | 34.8           | 43.4            |

| Parameter                            | Unit | SPH 10000TL-HU                                                                                                                                                                                                                                       | SPM 8000TL-HU                                                                                                                                                                                                                                                         | SPM 10000TL-HU | SPM 8000TL-HU2                                                                                                                                                                                                                                                                   | SPM 10000TL-HU2 |
|--------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Max. grid passthrough current        | A    | 62.5                                                                                                                                                                                                                                                 | -                                                                                                                                                                                                                                                                     |                |                                                                                                                                                                                                                                                                                  |                 |
| Max. grid passthrough power          | W    | -                                                                                                                                                                                                                                                    | 12000                                                                                                                                                                                                                                                                 | 15000          | 11000                                                                                                                                                                                                                                                                            |                 |
| Generator input                      |      | Yes                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Max. generator input power           | W    | 10000                                                                                                                                                                                                                                                | 8000                                                                                                                                                                                                                                                                  | 9999           | 8800                                                                                                                                                                                                                                                                             | 11000           |
| Backup output power                  | W    | 10000                                                                                                                                                                                                                                                | 8000                                                                                                                                                                                                                                                                  | 9999           | 8000                                                                                                                                                                                                                                                                             | 10000           |
| Nominal AC output voltage (backup)   |      | 220 V / 230 V / 240 V                                                                                                                                                                                                                                | 230 V single phase                                                                                                                                                                                                                                                    |                |                                                                                                                                                                                                                                                                                  |                 |
| Nominal AC output frequency (backup) | Hz   | 50/60                                                                                                                                                                                                                                                | 50                                                                                                                                                                                                                                                                    |                |                                                                                                                                                                                                                                                                                  |                 |
| Grid / off-grid switchover time      | ms   | <10                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Overload capability (backup output)  |      | -                                                                                                                                                                                                                                                    | 150% of full load for 5 s                                                                                                                                                                                                                                             |                | 200% of full load for 10 s                                                                                                                                                                                                                                                       |                 |
| Max. parallel units                  |      | 6                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Can form a 400 V three-phase system  |      | Yes                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Battery                              |      |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Battery type                         |      | Lithium or lead-acid                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Battery voltage range                | V    | 40 – 60                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Max. charge current                  | A    | 200                                                                                                                                                                                                                                                  | 165                                                                                                                                                                                                                                                                   | 200            | 170                                                                                                                                                                                                                                                                              | 210             |
| Max. discharge current               | A    | 200                                                                                                                                                                                                                                                  | 165                                                                                                                                                                                                                                                                   | 200            | 170                                                                                                                                                                                                                                                                              | 210             |
| Max. charge power                    | W    | 10000                                                                                                                                                                                                                                                | 8000                                                                                                                                                                                                                                                                  | 9999           | 8000                                                                                                                                                                                                                                                                             | 10000           |
| Max. discharge power                 | W    | 10000                                                                                                                                                                                                                                                | 8000                                                                                                                                                                                                                                                                  | 9999           | 8000                                                                                                                                                                                                                                                                             | 10000           |
| Battery communication protocol       |      | -                                                                                                                                                                                                                                                    | CAN / RS485                                                                                                                                                                                                                                                           |                |                                                                                                                                                                                                                                                                                  |                 |
| Efficiency                           |      |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Max. efficiency                      | %    | 97.5                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| European efficiency                  | %    | -                                                                                                                                                                                                                                                    | 96.5                                                                                                                                                                                                                                                                  |                |                                                                                                                                                                                                                                                                                  |                 |
| CEC efficiency                       | %    | 96.7                                                                                                                                                                                                                                                 | -                                                                                                                                                                                                                                                                     |                |                                                                                                                                                                                                                                                                                  |                 |
| MPPT efficiency                      | %    | ≥99.5                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Protection                           |      |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Protection functions                 |      | PV switch; AC overcurrent protection; AC overvoltage protection; ground fault monitoring; grid monitoring; anti-islanding protection; residual-current monitoring unit; insulation resistance monitoring; surge protection (DC Type II / AC Type II) | PV switch; AC overcurrent protection; AC overvoltage protection; ground fault monitoring; grid monitoring; anti-islanding protection; residual-current monitoring unit; insulation resistance monitoring; AFCI protection; surge protection (DC Type II / AC Type II) |                | PV switch; AC overcurrent protection; AC overvoltage protection; ground fault monitoring; grid monitoring; anti-islanding protection; residual-current monitoring unit; insulation resistance monitoring; AFCI protection (optional); surge protection (DC Type II / AC Type II) |                 |
| General data                         |      |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                |                                                                                                                                                                                                                                                                                  |                 |
| Dimensions (W x H x D)               | mm   | 440 × 883 × 254                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                | 363 × 653 × 229                                                                                                                                                                                                                                                                  |                 |

| Parameter                      | Unit  | SPH 10000TL-HU                                     | SPM 8000TL-HU                      | SPM 10000TL-HU | SPM 8000TL-HU2                          | SPM 10000TL-HU2 |
|--------------------------------|-------|----------------------------------------------------|------------------------------------|----------------|-----------------------------------------|-----------------|
| Weight                         | kg    | 48.84                                              |                                    |                | 25                                      |                 |
| Gross weight                   | kg    | -                                                  |                                    |                | 28                                      |                 |
| Ingress protection (IP rating) |       | IP65                                               |                                    |                |                                         |                 |
| Operating temperature range    | °C    | -25 – 60                                           |                                    |                |                                         |                 |
| Relative humidity              | %     | 0 – 100                                            |                                    |                |                                         |                 |
| Max. operating altitude        | m     | 2000                                               |                                    |                |                                         |                 |
| Cooling                        |       | Smart cooling                                      |                                    |                | Smart fan cooling                       |                 |
| Noise level                    | dB    | ≤60                                                |                                    |                | ≤50                                     |                 |
| Night-time power consumption   | W     | <60                                                |                                    |                | -                                       |                 |
| Topology                       |       | Transformerless                                    |                                    |                |                                         |                 |
| Warranty                       | years | 5 – 10                                             | 10                                 |                | 5                                       |                 |
| Supported system coupling      |       | DC-coupled; AC-coupled; AC-retrofit                | DC-coupled; AC-coupled             |                |                                         |                 |
| Communication                  |       |                                                    |                                    |                |                                         |                 |
| Display                        |       | LCD                                                | LCD touch screen                   |                |                                         |                 |
| Communication interfaces       |       | RS485; CAN; USB; Wi-Fi                             | RS485; CAN; USB; Wi-Fi; LAN        |                | RS485; CAN; USB; Wi-Fi                  |                 |
| Certifications                 |       |                                                    |                                    |                |                                         |                 |
| Certifications and standards   |       | CE-RED; CE-EMC; CE-LVD; RoHS; IEC 61683; IEC 60068 | CE; AS 609473                      |                | CE; IEC 61683; IEC 60068; EN 61000      |                 |
| Grid codes                     |       | NRS 097; IEC 62116; IEC 61727                      | G99; G100; AS 477.2:2020; CSIP-AUS |                | NRS 097; IEC 62116; IEC 61727; EN 50549 |                 |

Specifications are subject to change without notice. Values are typical at 25 °C unless stated.

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