

Single Phase String Inverter

3-6 kW Series



ATON

~~~~~ SERIES



**UNIBODY**  
One-piece  
Aluminum Housing



**PV OVERSIZE**  
1.5 Times PV Oversize



**MPPT CHANNELS**  
Up to 2 MPPT Channels



**CONFIGURATION**  
Quick & Easy  
Config. via Wi-Fi

MPPT efficiency > 99.9%

Two MPPT design

Active and reactive power compensation, adjust power factor

No fans design

Quick and easy installation

High-quality power output and low THDI

info@aforeenergy.it info@aforeenergy.com  
www.aforeenergy.it www.aforeenergy.com  
IT: +39 3313829744 CN: +86 2154326236

| <b>PV Input Data</b>                     | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|------------------|
| Max. DC Power (W)                        | 4500                                                                                                                | 5400             | 6000             | 7000             | 8400             |
| Max. DC Voltage (V)                      | 600                                                                                                                 | 600              | 600              | 600              | 600              |
| MPPT Voltage Range (V)                   | 70-550                                                                                                              | 70-550           | 70-550           | 70-550           | 70-550           |
| MPPT Full Power Voltage Range (V)        | 110-550                                                                                                             | 130-550          | 145-550          | 180-550          | 220-550          |
| Rated Input Voltage (V)                  | 360                                                                                                                 |                  |                  |                  |                  |
| Start-up Voltage (V)                     | 70                                                                                                                  |                  |                  |                  |                  |
| Max. Input Current (A)                   | 14 x 2                                                                                                              |                  |                  |                  |                  |
| Max. Short Current (A)                   | 18 x 2                                                                                                              |                  |                  |                  |                  |
| No. of MPP Tracker /<br>No. of PV String | 2/2                                                                                                                 |                  |                  |                  |                  |
| Input Connector Type                     | MC4                                                                                                                 |                  |                  |                  |                  |
| <b>AC Output Data</b>                    | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
| Max. Output Power (W)                    | 3300                                                                                                                | 3960             | 4400             | 5500             | 6600             |
| Nominal Output Power (W)                 | 3000                                                                                                                | 3600             | 4000             | 5000             | 6000             |
| Max. Output Current (A)                  | 15                                                                                                                  | 17.5             | 20               | 24               | 28.7             |
| Nominal Output Voltage (V)               | L/N/PE, 220Vac, 230Vac, 240Vac                                                                                      |                  |                  |                  |                  |
| Grid Voltage Range                       | 180Vac-276Vac (According to local standard)                                                                         |                  |                  |                  |                  |
| Nominal Output Frequency (Hz)            | 50/60                                                                                                               |                  |                  |                  |                  |
| Grid Frequency Range                     | 45-55Hz/54-66Hz (According to local standard)                                                                       |                  |                  |                  |                  |
| Output Power Factor                      | 1 default (adjustable from 0.8 leading to 0.8 lagging)                                                              |                  |                  |                  |                  |
| Output Current THD                       | <3%                                                                                                                 |                  |                  |                  |                  |
| <b>Efficiency</b>                        | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
| Max. Efficiency                          | 98.20%                                                                                                              | 98.20%           | 98.20%           | 98.20%           | 98.20%           |
| Euro Efficiency                          | 97.80%                                                                                                              | 97.82%           | 97.85%           | 97.90%           | 97.92%           |
| <b>Protection</b>                        | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
| PV Reverse Polarity Protection           | YES                                                                                                                 |                  |                  |                  |                  |
| PV Insulation Resistance Detection       | YES                                                                                                                 |                  |                  |                  |                  |
| AC Short Circuit Protection              | YES                                                                                                                 |                  |                  |                  |                  |
| AC Over Current Protection               | YES                                                                                                                 |                  |                  |                  |                  |
| AC Over Voltage Protection               | YES                                                                                                                 |                  |                  |                  |                  |
| Anti-Islanding Protection                | YES                                                                                                                 |                  |                  |                  |                  |
| Residual Current Detection               | YES                                                                                                                 |                  |                  |                  |                  |
| Over Temperature Protection              | YES                                                                                                                 |                  |                  |                  |                  |
| Integrated DC switch                     | YES                                                                                                                 |                  |                  |                  |                  |
| Surge Protection                         | Integrated (Type III)                                                                                               |                  |                  |                  |                  |
| Smart IV Curve Scanning                  | YES                                                                                                                 |                  |                  |                  |                  |
| Quick Arc Fault Circuit Interruption     | Optional                                                                                                            |                  |                  |                  |                  |
| <b>General Data</b>                      | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
| Dimensions (H x W x D, mm)               | 370 x 350 x 142                                                                                                     |                  |                  |                  |                  |
| Weight (kg)                              | 11                                                                                                                  |                  |                  |                  |                  |
| Protection Degree                        | IP65                                                                                                                |                  |                  |                  |                  |
| Enclosure Material                       | Aluminum                                                                                                            |                  |                  |                  |                  |
| Ambient Temperature Range (°C)           | -25 to 60                                                                                                           |                  |                  |                  |                  |
| Humidity Range                           | 0-100%                                                                                                              |                  |                  |                  |                  |
| Topology                                 | Transformerless                                                                                                     |                  |                  |                  |                  |
| Communication Interface                  | RS485 / WiFi / Wire Ethernet / GPRS (optional)                                                                      |                  |                  |                  |                  |
| Cooling Concept                          | Convection                                                                                                          |                  |                  |                  |                  |
| Noise Emission (db)                      | <28                                                                                                                 |                  |                  |                  |                  |
| Night Power Consumption (W)              | <1                                                                                                                  |                  |                  |                  |                  |
| Max. Operation Altitude (m)              | 4000                                                                                                                |                  |                  |                  |                  |
| <b>Certifications and Standards</b>      | <b>HNS3000TL</b>                                                                                                    | <b>HNS3600TL</b> | <b>HNS4000TL</b> | <b>HNS5000TL</b> | <b>HNS6000TL</b> |
| EMC Standard                             | EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12                            |                  |                  |                  |                  |
| Safety Standard                          | IEC 60068, UL1741, EN62109                                                                                          |                  |                  |                  |                  |
| Grid-connection                          | IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98/G99, IEC61727 |                  |                  |                  |                  |