

# Single Phase PV String Inverter

## 1-3 kW



The Afore HNS Series Single-phase inverters are designed for residential PV system applications, rating from 1kW to 3kW. All models have unibody housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. The unibody housing can ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module (can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

						
<b>ANTI-FLOW</b> Anti-Feed-in Function	<b>Max. 1.5</b> Max. 1.5 time PV Oversize Capacity	<b>PROTECTION</b> Multiple intelligent Protections	<b>SMART</b> Smart IV Curve Scanning	<b>Wi-Fi</b> Wi-Fi Standard Ethernet/GPRS Optional	<b>CONFIGURATION</b> Quick & Easy Config. via Wi-Fi	<b>MODBUS</b> MODBUS Communication Ready

MPPT efficiency > 99.9%

Compact and light body design

Active and reactive power compensation, adjust power factor



No fans design

Quick and easy installation

AC output 1.1x continuous operation

Technical Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
<b>PV Input Data</b>					
Max. DC Power ( W )	1500	2250	3000	3750	4200
Max. DC Voltage ( V )	500	500	500	500	500
MPPT Voltage Range ( V )	50 - 500	50 - 500	50 - 500	50 - 500	50 - 500
MPPT Full Power Voltage Range ( V )	70 - 500	110 - 500	145 - 500	180 - 500	220 - 500
Rated Input Voltage ( V )	360				
Start-up Voltage ( V )	50				
Max. Input Current ( A )	14				
Max. Short Current ( A )	18				
No. of MPP Tracker / No. of PV String	1/1				
Input Connector Type	MC4				
<b>AC Output Data</b>					
Max. Output Power ( VA )	1100 *	1650 *	2200 *	2750 *	3300 *
Nominal Output Power ( W )	1000	1500	2000	2500	3000
Max. Output Current ( A )	6	9	12	13	15
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>					
Max. Efficiency	97.50%	97.80%	98.10%	98.10%	98.13%
Euro Efficiency	96.60%	96.70%	96.80%	97.23%	97.56%
<b>Protection</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>					
Dimensions (W x H x D, mm)	280 x 260 x 116				
Weight ( kg )	6				
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 )	<21				
Night Power Consumption ( W )	<0.2	<0.2	<1	<1	<1
Max. Operation Altitude ( m )	4000				
<b>Certifications and Standards</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, IEC61727				

\* For Belgium Max. Output Power (VA) HNS1000TL-1 is 1000; HNS1500TL-1 is 1500; HNS2000TL-1 is 2000; HNS2500TL-1 is 2500; HNS3000TL-1 is 3000