

Residential HNS series

# HNS-TL

3-6 kW



The Afore HNS Series Single-phase inverters are designed for residential PV system applications, rating from 3kW to 6kW. All models have unibody housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, the unibody housings 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.



**ANTI-FLOW**  
Anti-Feed-in Function



**PV OVERSIZE**  
Max. 1.5 time  
PV Oversize Capacity



**PROTECTION**  
Multiple intelligent  
Protections



**SMART**  
Smart IV Curve Scanning



**Wi-Fi**  
Wi-Fi Standard  
Ethernet/GPRS Optional



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



**MODBUS**  
MODBUS  
Communication Ready

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

PV Input Data	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
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 / No. of PV String	2/2				
Input Connector Type	MC4				

AC Output Data	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
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%				

Efficiency	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
Max. Efficiency	98.20%	98.20%	98.20%	98.20%	98.20%
Euro Efficiency	97.80%	97.82%	97.85%	97.90%	97.92%

Protection	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
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				

General Data	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
Dimensions (W x H x D, mm)	365 x 360 x 135				
Weight ( kg )	10				
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				

Certifications and Standards	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL
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				