

Residential HNS series

HNS-TL

3-5 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
Max. DC Power (W)	4500	5400	6000	7000
Max. DC Voltage (V)	600	600	600	600
MPPT Voltage Range (V)	70-550	70-550	70-550	70-550
MPPT Full Power Voltage Range (V)	110-550	130-550	145-550	180-550
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
Max. Output Power (W)	3300	3960	4400	5500
Nominal Output Power (W)	3000	3600	4000	5000
Max. Output Current (A)	15	17.5	20	24
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
Max. Efficiency	98.20%	98.20%	98.20%	98.20%
Euro Efficiency	97.80%	97.82%	97.85%	97.90%

Protection	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL
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
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 - + 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
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			