

Commercial & Power Plants BNT series

# BNT

## 12-20 kW



The Afore BNT Series Three-phase string inverters are designed for residential and small commercial PV system applications, rating from 12kW to 20kW. 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



**UNIBODY**  
One-piece  
Aluminum Housing



**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



IP 68 Cooling Fan



Quick and easy installation



High-quality power output and low THDI

PV Input Data	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
Max. DC Power ( W )	18000	21000	25500	28000
Max. DC Voltage ( V )	1000	1000	1000	1000
MPPT Voltage Range ( V )	200-850	200-850	200-950	200-950
MPPT Full Power Voltage Range ( V )	500-850	500-850	500-850	500-850
Rated Input Voltage ( V )	620	620	620	620
Start-up Voltage ( V )	200	200	200	200
Max. Input Current ( A )	22 + 11	22 + 11	21 x 2	22 x 2
Max. Short Current ( A )	25 + 15	25 + 15	27 x 2	28 x 2
No. of MPP Tracker / No. of PV String	2/3	2/3	2/4	2/4
Input Connector Type	MC4	MC4	MC4	MC4

AC Output Data	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
Max. Output Power ( W )	13200	16500	18700	22000
Nominal Output Power ( W )	12000	15000	17000	20000
Max. Output Current ( A )	21.5	27	30	32
Nominal Output Voltage ( V )	3P+N+PE /3P+PE 230/400			
Grid Voltage Range	260-519 (according to local standard)			
Nominal Output Frequency ( Hz )	50/60			
Grid Frequency Range	45-55/55-65(according to local standard)			
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)			
Output Current THD	<3%			

Efficiency	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
Max. Efficiency	98.50%	98.50%	98.50%	98.50%
Euro Efficiency	98.00%	98.00%	98.10%	98.10%

Protection	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
PV Reverse Polarity Protection	YES	YES	YES	YES
PV Insulation Resistance Detection	YES	YES	YES	YES
AC Short Circuit Protection	YES	YES	YES	YES
AC Over Current Protection	YES	YES	YES	YES
AC Over Voltage Protection	YES	YES	YES	YES
Anti-Islanding Protection	YES	YES	YES	YES
Residual Current Detection	YES	YES	YES	YES
Over Temperature Protection	YES	YES	YES	YES
Integrated DC switch	YES	YES	YES	YES
Surge Protection	Integrated (Type III)			

General Data	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
Dimensions (W x H x D, mm)	680 x 345 x 170			
Weight ( kg )	22			23
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		Intelligent fan cooling	
Noise Emission ( db )	<40		<50	
Night Power Consumption ( W )	<1			
Max. Operation Altitude ( m )	4000			

Certifications and Standards	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL
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, IEEE1547,EN62109			
Grid-connection	UL1741,EN50549,VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150,AS4777.2, NB/T32004, G98/G99,IEC61727,CSA C22			