

Commercial & Power Plants BNT series

BNT

3-25 kW



Smart | Safety | Efficient

The Afore BNT Series Three-phase string inverters are designed for residential and small commercial PV system applications, rating from 3kW to 25kW. 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.

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.

-  Quick Arc Fault circuit interruption (Optional)
-  GPRS standard
-  Compact design
-  Multiple intelligent protections
-  Complatible with bifacial modules
-  String level monitoring



MPPT Range
Wide MPPT Range



PV OVERSIZE
1.5 Times PV Oversize



DC 1100V
Max. DC 1100V



UNIBODY
One-piece
Aluminum Housing



PROTECTION
Build-in SPD Type III
(Type II Optional)



SMART
Smart IV Curve Scanning



UPDATE
Remote Fireware Update

PV Input Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
Max. DC Power (kW)	5.1	6	7.5	9	12
Max. DC Voltage (V)	1100				
MPPT Voltage Range (V)	150 -1000				
MPPT Full Power Voltage Range (V)	200-850				300-850
Rated Input Voltage (V)	620				
Start-up Voltage (V)	150				
Max. Input Current (A)	15 x 2				
Max. Short Current (A)	25 x 2				
No. of MPP Tracker / No. of PV String	2/2				
Input Connector Type	MC4				

AC Output Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
Max. Output Power (kW)	3.3	4.4	5.5	6.6	8.8
Nominal Output Power (kW)	3	4	5	6	8
Max. Output Current (A)	5.3	7	8.5	10.5	13.5
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	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
Max. Efficiency	98.30%				
Euro Efficiency	97.61%	97.65%	98.00%	98.05%	

Protection	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
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 II)				
Smart IV Curve Scaning	YES				
Quick Arc Fault Circuit Interruption	Optional				

General Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
Dimensions (W x H x D, mm)	510 x 370 x 170				
Weight (kg)	17				
Protection Degree	IP65				
Enclosure Material	Aluminum				
Ambient Temperature Range (°)	-25 - +60				
Humidity Range	0-100%				
Topology	Transformerless				
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS				
Cooling Concept	Convection				
Noise Emission (db)	<30				
Night Power Consumption (W)	<1				
Max. Operation Altitude (m)	≤4000				

Certifications and Standards	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL
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				

PV Input Data	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. DC Power (kW)	14	18	22.5	25.5	30	35
Max. DC Voltage (V)	1100					
MPPT Voltage Range (V)	150 - 1000					
MPPT Full Power Voltage Range (V)	500-850					
Rated Input Voltage (V)	620					
Start-up Voltage (V)	150					
Max. Input Current (A)	15 x 2	15 + 26			26 + 26	
Max. Short Current (A)	25 x 2	25 + 48			48 x 2	48 x 3
No. of MPP Tracker / No. of PV String	2/2	2/3			2/4	
Input Connector Type	MC4					

AC Output Data	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. Output Power (kW)	11	13.2	16.5	18.7	22	27.5
Nominal Output Power (kW)	10	12	15	17	20	25
Max. Output Current (A)	17	21.5	27	30	32	40
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	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. Efficiency	98.70%			98.75%		
Euro Efficiency	98.23%			98.35%		

Protection	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
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 II)					
Smart IV Curve Scaning	YES					
Quick Arc Fault Circuit Interruption	Optional					

General Data	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Dimensions (W x H x D, mm)	510 x 370 x 170					
Weight (kg)	17	19			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					
Cooling Concept	Convection	Intelligent fan cooling				
Noise Emission (db)	<30	<40			<51	
Night Power Consumption (W)	<1					
Max. Operation Altitude (m)	≤4000					

Certifications and Standards	BNT010KTL	BNT012KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
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