

Commercial & Power Plants BNT series

BNT

3-25 kW

ATON
SERIES

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)
- WiFi standard
- Compact design
- Multiple intelligent protections
- Compatible with bifacial modules
- String level monitoring



MPPT Range
Wide MPPT Range



Max. 1.5
PV OVERSIZE
1.5 Times PV Oversize



Max. 1100V
DC 1100V
Max. DC 1100V



UNIBODY
One-piece
Aluminum Housing



PROTECTION
Build-in SPD Type II



SMART
Smart IV Curve Scanning



UPDATE
Remote Firmware Update

PV Input Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL	
Max. DC Power (W)	5100	6000	7500	9000	12000	15000	
Max. DC Voltage (V)	1100						
MPPT Voltage Range (V)	150 - 1000						
MPPT Full Power Voltage Range (V)	200 - 850			250 - 850		300 - 850	500 - 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 MPPT Tracker / No. of PV String	2/2						
Input Connector Type	MC4						

AC Output Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
Max. Output Power (W)	3300	4400	5500	6600	8800	11000
Nominal Output Power (W)	3000	4000	5000	6000	8000	10000
Max. Output Current (A)	5.3	7	8.5	10.5	13.5	17
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	BNT010KTL
Max. Efficiency		98.30%	98.30%		98.70%	98.70%
Euro Efficiency	97.61%	97.65%	98.00%		98.05%	98.23%

Protection	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
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 Scanning			YES			
Quick Arc Fault Circuit Interruption			Optional			

General Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
Dimensions (H x W x D, mm)	550 x 370 x 167					
Weight (kg)	17					
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					
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	BNT010KTL
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	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. DC Power (W)	18000	19500	22500	25500	30000	37500
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 + 26					26 x 2
Max. Short Current (A)	25 + 48					48 x 2
No. of MPPT Tracker / No. of PV String	2/3					2/4
Input Connector Type	MC4					

AC Output Data	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. Output Power (W)	13200	14300	16500	18700	22000	27500
Nominal Output Power (W)	12000	13000	15000	17000	20000	25000
Max. Output Current (A)	21.5	22	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	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. Efficiency		98.70%			98.75%	
Euro Efficiency		98.23%			98.35%	

Protection	BNT012KTL	BNT013KTL	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 Scanning			YES			
Quick Arc Fault Circuit Interruption			Optional			

General Data	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Dimensions (H x W x D, mm)			510 x 370 x 167			
Weight (kg)	19				21	
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			
Cooling Concept			Intelligent fan cooling			
Noise Emission (dB)			<40		<51	
Night Power Consumption (W)			<1			
Max. Operation Altitude (m)			≤4000			

Certifications and Standards	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12					
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