

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



- MPPPT**  
Wide MPPPT 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 (Type II Optional)
- 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			
MPPV Voltage Range (V)			150 - 1000			
MPPV 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 MPP 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	4000	5500	6600	8800	11000
Nominal Output Power (W)	3000	4000	5000	6000	8000	10000
Max. Output Current (A)		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	97.61%	97.65%	98.30%	98.00%	98.05%	98.70%
Euro Efficiency			98.00%		98.05%	98.23%

Protection	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
PV Reverse Polarity Protection	YES	YES	YES	YES	YES	YES
PV Insulation Resistance Detection	YES	YES	YES	YES	YES	YES
AC Short Circuit Protection	YES	YES	YES	YES	YES	YES
AC Over Current Protection	YES	YES	YES	YES	YES	YES
AC Over Voltage Protection	YES	YES	YES	YES	YES	YES
Anti-Islanding Protection	YES	YES	YES	YES	YES	YES
Residual Current Detection	YES	YES	YES	YES	YES	YES
Over Temperature Protection	YES	YES	YES	YES	YES	YES
Integrated DC switch	YES	YES	Integrated (Type II)	YES	YES	YES
Surge Protection	YES	YES	Integrated (Type II)	YES	YES	YES
Smart IV Curve Scanning	YES	YES	Optional	YES	YES	YES
Quick Arc Fault Circuit Interruption	Optional	Optional	Optional	Optional	Optional	Optional

General Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
Dimensions (H x W x D, mm)			510 x 370 x 167			
Weight (kg)			17			
Protection Degree			IP 65			
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			
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			
MPPV Voltage Range (V)			150 - 1000			
MPPV 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 MPP 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
Nominal Output Voltage (V)			3P+N+PE / 3P+PE 230/400			40
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%	98.70%	98.23%	98.75%	98.35%	98.75%
Euro Efficiency			98.23%		98.35%	98.75%

Protection	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
PV Reverse Polarity Protection	YES	YES	YES	YES	YES	YES
PV Insulation Resistance Detection	YES	YES	YES	YES	YES	YES
AC Short Circuit Protection	YES	YES	YES	YES	YES	YES
AC Over Current Protection	YES	YES	YES	YES	YES	YES
AC Over Voltage Protection	YES	YES	YES	YES	YES	YES
Anti-Islanding Protection	YES	YES	YES	YES	YES	YES
Residual Current Detection	YES	YES	YES	YES	YES	YES
Over Temperature Protection	YES	YES	YES	YES	YES	YES
Integrated DC switch	YES	YES	Integrated (Type II)	YES	YES	YES
Surge Protection	YES	YES	Integrated (Type II)	YES	YES	YES
Smart IV Curve Scanning	YES	YES	Optional	YES	YES	YES
Quick Arc Fault Circuit Interruption	Optional	Optional	Optional	Optional	Optional	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 - +60			
Humidity Range			0-100%			
Topology			Transformerless			
Communication Interface			RS485 / WiFi / Wire Ethernet / GPRS			
Cooling Concept			Intelligent fan cooling			
Noise Emission (db)			<40			
Night Power Consumption (W)			<1			<51
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					
Safety Standard	IEC 60068, UL1741, EN62109					
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