














Three Phase PV String Inverter

40-60 kW Low-voltage Series



The Afore Three-phase string inverters Low-voltage Series are designed for commercial and power plant PV system applications, rating from 40kW to 60kW. All models with aluminum housings which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, 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 (which can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

 SMART Intelligent string monitoring, Smart I-V curve scan	 PROTECTION Type II DC & AC Lighting Protection	 Max. 38A String Current Up to 38A	>1.5 icon" data-bbox="275 725 308 770"/> >1.5 PV OVERSIZE >1.5 Time PV Oversize Input	 POWER FACTOR Active and Reactive Power Compensation	 ANTI-FLOW Anti-Feed-in Function		
IP68 Cooling Fan 		Compatible with 210 Solar Panel & bifacial module 		Arc Fault Circuit Interrupter (AFCI) (Optional) 		AC output 1.1x continuous operation 	
		Multiple Intelligent Protections 		Remote firmware upgrade with simple operation 		DC side supports "Y" connector 	
				Supports aluminium wire access to reduce cost 			

■ Technical Data	BNT040KTA	BNT050KTA	BNT060KTA
PV Input Data			
Max. DC Power (W)	60000	75000	90000
Max. DC Voltage (V)		750	
MPPT Voltage Range (V)		200 - 750	
MPPT Full Power Voltage Range (V)		300 - 750	
Rated Input Voltage (V)		400	
Start-up Voltage (V)		200	
Max. Input Current (A)		38 x 6	
Max. Short Current (A)		48 x 6	
No. of MPP Tracker / No. of PV String		6/12	
Input Connector Type		MC4	
AC Output Data			
Max. Output Power (VA)	44000	55000	66000
Nominal Output Power (W)	40000	50000	60000
Max. Output Current (A)	120	143	158
Nominal Output Voltage (V)	3P+N+PE / 3P+PE 133/230		
Grid Voltage Range	180Vac-260Vac (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			
Max. Efficiency		99.00%	
Euro Efficiency	93.00%		98.40%
Protection			
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			
Dimensions (W x H x D, mm)		979 x 610 x 310	
Weight (kg)	72		76
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 (optional)	
Cooling Concept		Intelligent fan cooling	
Night Power Consumption (W)		<1	
Max. Operation Altitude (m)		≤4000	
Certifications and Standards			
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		