



ENERGY STORAGE SYSTEM SOLUTIONS PV SYSTEM SOLUTIONS

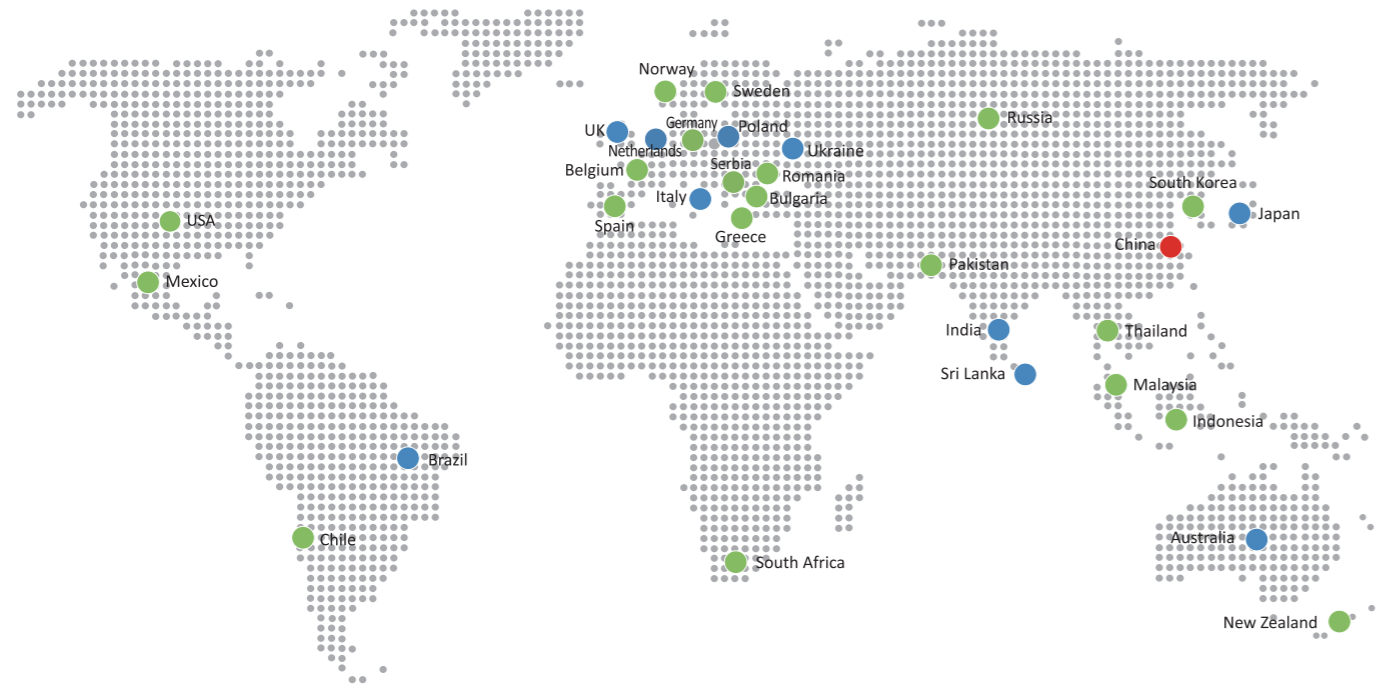


Afore New Energy Technology (Shanghai) Co., Ltd.

Building 7, No.333 Wanfang Rd, Minhang District,
Shanghai, China. 201112

T +86-21-54326236 **F** +86-21-54326136
W www.aforeenergy.com **E** info@aforeenergy.com

| Global Market



● Headquarter
 ● Service Center
 ● Local Partner
 (Only the main ones are marked)

| About Us

Afore is a leading PV inverter provider from China, with more than fourteen years dedicated experience in PV inverter R&D and manufacturing, Afore inverters have been installed in Europe, Australia, China, Indian, Japan, North America and South America, meeting the needs of global users.

We provide single and three-phase high-efficiency PV string inverters for a capacity of 1kW to 110kW, storage inverters (single phase 1-6kW, three phase 3-50kW, split phase 3-9.6kW, AC coupled), energy storage battery series (low voltage wall mounted series, high voltage stackable series) and all-in-one storage products. All of our inverters are integrated with smart monitoring system.

We offer not just good products, but also high-efficient local support to our partners and users throughout the inverter life span. Make sure the customers receive reliable returns by choosing Afore!

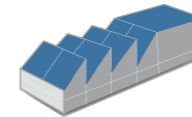
| Contents



Single Phase PV String Inverter

Residential System

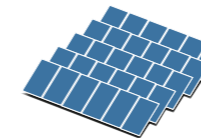
Single Phase 1-3kW, Single Phase 3-6kW, Single Phase 7-10kW



Three Phase PV String Inverter

Residential & Small Commercial System

Three Phase 3-25kW



Three Phase PV String Inverter

Commercial System and Power Plants

Three Phase 30kW, Three Phase 36-60kW, Three Phase 70-110kW



Energy storage system

Residential and Commercial Storage System

Single Phase Hybrid Inverter 1-6kW
 Three Phase Hybrid Inverter 3-30kW
 Three Phase Hybrid Inverter 36-50kW

Single Phase AC Coupled Inverter 1-6kW
 Three Phase AC Coupled Inverter 3-30kW

Split Phase Hybrid Inverter 3-9.6kW

Low Voltage Stackable Energy Storage Battery (2.56-20.48kWh)
 Wall Mounted Energy Storage Battery (5/10/15kWh)
 High Voltage Stackable Energy Storage Battery (7.68-30.72kWh)

**Single Phase
PV String Inverter**
1-3 kW



**Single Phase
PV String Inverter**
3-6 kW



**Single Phase
PV String Inverter**
7-10 kW



■ Technical Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1	HNS3000TL	HNS3600TL	HNS4000TL	HNS4950TL*1	HNS5000TL	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL	
PV Input Data																
Max. DC Power (W)	1500	2250	3000	3750	4200	4500	5400	6000	7000	7000	8400	9800	11200	12600	14000	
Max. DC Voltage (V)	500	500	500	500	500	600	600	600	600	600	600	600	600	600	600	
MPPT Voltage Range (V)	50 - 500	50 - 500	50 - 500	50 - 500	50 - 500	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	70 - 550	
MPPT Full Power Voltage Range (V)	70 - 500	110 - 500	145 - 500	180 - 500	220 - 500	110 - 550	130 - 550	145 - 550	180 - 550	180 - 550	220 - 550	220 - 550	220 - 550	220 - 550	220 - 550	
Rated Input Voltage (V)						360					360					
Start-up Voltage (V)						50					70					
Max. Input Current (A)						14					14 x 2		14+26		26+26	
Max. Short Current (A)						18					18 x 2		18+35		35+35	
No. of MPP Tracker / No. of PV String						1/1					2/2		2/3		2/4	
Input Connector Type						MC4					MC4					
AC Output Data																
Max. Output Power (VA)	1100*2	1650*2	2200*2	2750*2	3300*2	3300*2	3960*2	4400*2	4950	5500*2	6600*2	7700	8800	9900	11000	
Nominal Output Power (W)	1000	1500	2000	2500	3000	3000	3600	4000	4950	5000	6000	7000	8000	9000	10000	
Max. Output Current (A)	6	9	12	13	15	15	17.5	20	24	24	28.7	33.6	38.3	45	50	
Nominal Output Voltage (V)	L/N/PE, 220Vac, 230Vac, 240Vac					L/N/PE, 220Vac, 230Vac, 240Vac					L/N/PE, 220Vac, 230Vac, 240Vac					
Grid Voltage Range	180Vac-276Vac (According to local standard)					180Vac-276Vac (According to local standard)					180Vac-276Vac (According to local standard)					
Nominal Output Frequency (Hz)	50/60					50/60					50/60					
Grid Frequency Range	45-55Hz/54-66Hz (According to local standard)					45-55Hz/54-66Hz (According to local standard)					45-55Hz/54-66Hz (According to local standard)					
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					1 default (adjustable from 0.8 leading to 0.8 lagging)					1 default (adjustable from 0.8 leading to 0.8 lagging)					
Output Current THD	<3%					<3%					<3%					
Efficiency																
Max. Efficiency	97.50%	97.80%	98.10%	98.10%	98.13%	98.20%	98.20%	98.20%	98.20%	98.20%	98.20%	98.20%	98.20%	98.32%	98.40%	
Euro Efficiency	96.60%	96.70%	96.80%	97.23%	97.56%	97.80%	97.82%	97.85%	97.90%	97.90%	97.92%	97.95%	98.00%	98.00%	98.10%	
Protection																
PV Reverse Polarity Protection	YES					YES					YES					
PV Insulation Resistance Detection	YES					YES					YES					
AC Short Circuit Protection	YES					YES					YES					
AC Over Current Protection	YES					YES					YES					
AC Over Voltage Protection	YES					YES					YES					
Anti-Islanding Protection	YES					YES					YES					
Residual Current Detection	YES					YES					YES					
Over Temperature Protection	YES					YES					YES					
Integrated DC switch	YES					YES					YES					
Surge Protection	Integrated (Type III)					Integrated (Type III)					Integrated (Type III)					
Smart IV Curve Scanning	YES					YES					YES					
Quick Arc Fault Circuit Interruption	Optional					Optional					Optional					
General Data																
Dimensions (W x H x D, mm)	280 x 260 x 116					358 x 360 x 142					370 x 510 x 192		370 x 535 x 192			
Weight (kg)	6					10					17		18			
Protection Degree	IP65					IP65					IP65					
Enclosure Material	Aluminum					Aluminum					Aluminum					
Ambient Temperature Range (°C)	-25 - + 60					-25 - + 60					-25 - + 60					
Humidity Range	0 - 100%					0 - 100%					0 - 100%					
Topology	Transformerless					Transformerless					Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional)					RS485 / WiFi / Wire Ethernet / GPRS (optional)					RS485 / WiFi / Wire Ethernet / GPRS (optional)					
Cooling Concept	Convection					Convection					Convection		Intelligent fan cooling			
Noise Emission (db)	<21					<28					<40					
Night Power Consumption (W)	<0.2	<0.2	<1	<1	<1	<1					<1					
Max. Operation Altitude (m)	4000					4000					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					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					IEC 60068, UL1741, EN62109										
Grid connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98/G99, IEC61727					IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98/G99, IEC61727										

Three Phase PV String Inverter

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)
- WIFI standard
- Compact design
- Multiple intelligent protections
- Compatible 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 II



SMART
Smart IV Curve Scanning



UPDATE
Remote Firmware Update

■ Technical Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
PV Input Data						
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	
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						
Max. Output Power (VA)	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	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-65Hz(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			98.30%			98.70%
Euro Efficiency	97.61%	97.65%	98.00%	98.05%	98.23%	
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)	370 x 510 x 167			370 x 510 x 192		
Weight (kg)	16					
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	Convection			Intelligent fan cooling		
Noise Emission (db)	<30					
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					

■ Technical Data	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
PV Input Data						
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 x 2	20 + 32		32 x 2		
Max. Short Current (A)	25 x 2	30 + 48		48 x 2		
No. of MPP Tracker / No. of PV String	2/2	2/3		2/4		
Input Connector Type	MC4					
AC Output Data						
Max. Output Power (VA)	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	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-65Hz(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	98.70%				98.75%	
Euro Efficiency	98.23%				98.35%	
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)	370 x 510 x 192			370 x 535 x 192		
Weight (kg)	16	17			19	
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					
Noise Emission (db)	<40			<51		
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					

Three Phase PV String Inverter

30-60 kW



The Afore BNT Series Three-phase string inverters are designed for commercial and power plant PV system applications, rating from 30kW to 60kW. All models with aluminum housing 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.

Max. 20A MAX. 20A dc String Current Up To 20A	Max. 1.5 PV OVERSIZE Max. 1.5 Time PV Oversize Input	PROTECTION Multiple Intelligent Protections	ANTI-FLOW Anti-Feed-in Function	Wi-Fi Wi-Fi Standard, Ethernet/GPRS Optional	CONFIGURATION Quick & Easy Config. via Wi-Fi	MODBUS MODBUS Communication Ready
------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------	-------------------------------------------	-----------------------------------------------------------	-----------------------------------------------------------	------------------------------------------------

MPPT efficiency > 99.9%	IP 68 Cooling Fan
Intelligent Temperature Control System	Type II DC & AC lightning protection
Active and reactive power compensation, adjust power factor	AC output 1.1x continuous operation

Technical Data	BNT030KTL	BNT036KTL	BNT040KTL	BNT050KTL	BNT060KTL
PV Input Data					
Max. DC Power (W)	45000	54000	60000	75000	90000
Max. DC Voltage (V)	1100				
MPPT Voltage Range (V)	200 -1000				
MPPT Full Power Voltage Range (V)	500 - 850				
Rated Input Voltage (V)	620				
Start-up Voltage (V)	200				
Max. Input Current (A)	38 x 2	38 x 3	40 x 3	38 x 4	
Max. Short Current (A)	48 x 2	48 x 3	48 x 3	48 x 4	
No. of MPP Tracker / No. of PV String	2/5	3/6	3/7	4/8	
Input Connector Type	MC4				
AC Output Data					
Max. Output Power (VA)	33000*	39600*	44000*	55000*	66000*
Nominal Output Power (W)	30000	36000	40000	50000	60000
Max. Output Current (A)	48	60	65	80	96
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400				
Grid Voltage Range	260Vac-519Vac (according to local standard)				
Nominal Output Frequency (Hz)	50/60				
Grid Frequency Range	45-55Hz/55-65Hz (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	98.50%	98.65%	98.65%	98.80%	99.00%
Euro Efficiency	98.10%	98.20%	98.25%	98.45%	98.50%
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)	450 x 485 x 210	710 x 470 x 236			
Weight (kg)	26	44	51		
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				
Noise Emission (db)	<51			<55	
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				














Three Phase PV String Inverter

70-110 kW



The Afore BNT Series Three-phase string inverters are designed for commercial and power plant PV system applications, rating from 70kW to 110kW. All models with aluminum housing 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 		Multiple Intelligent Protections 		Remote firmware upgrade with simple operation 	
Compatible with 210 Solar Panel & bifacial module 		DC side supports "Y" connector 		Supports aluminium wire access to reduce cost 	
Arc Fault Circuit Interrupter (AFCI) (Optional) 		AC output 1.1x continuous operation 			

Technical Data	BNT070KTL	BNT075KTL	BNT080KTL	BNT090KTL	BNT100KTL	BNT110KTL
PV Input Data						
Max. DC Power (W)	105000	112500	120000	135000	150000	165000
Max. DC Voltage (V)	1100					
MPPT Voltage Range (V)	200 - 1000					
MPPT Full Power Voltage Range (V)	500 - 850					
Rated Input Voltage (V)	620					
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)	77000	82500	88000	99000	110000	110000
Nominal Output Power (W)	70000	75000	80000	90000	100000	110000
Max. Output Current (A)	111	120	127	143	158	158
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400					
Grid Voltage Range	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-66Hz(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	98.30%			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					
Noise Emission (db)	<55			<60		
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					