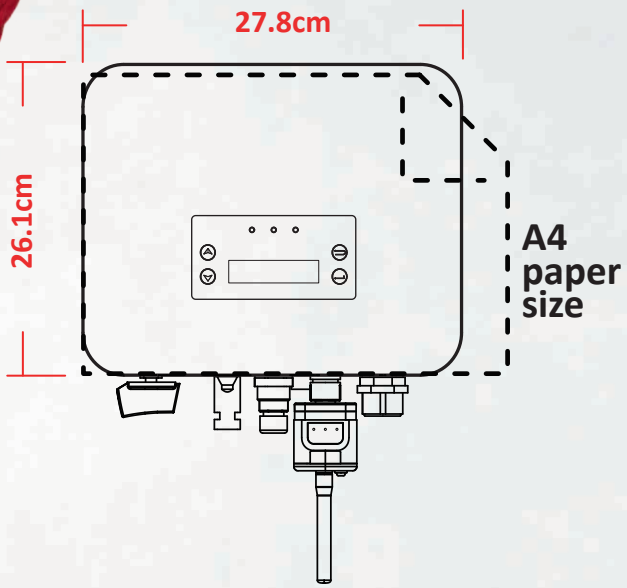
Residential HNS series

HNS-TL1

1-3 kW



The Afore HNS Series Single-phase inverters are designed for residential PV system applications, rating from 1kW to 3kW. All models have unibody housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. The unibody housing can 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 (can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

ANTI-FLOW
Anti-Feed-in Function

PV OVERSIZE
Max. 1.5 time
PV Oversize Capacity

PROTECTION
Multiple intelligent
Protections

SMART
Smart IV Curve Scanning

Wi-Fi
Wi-Fi Standard
Ethernet/GPRS Optional

CONFIGURATION
Quick & Easy
Config. via Wi-Fi

MODBUS
MODBUS
Communication Ready

- MPPT efficiency > 99.9%
- Compact and light body design
- Active and reactive power compensation, adjust power factor
- No fans design
- Quick and easy installation
- AC output 1.1x continuous operation

PV Input Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
Max. DC Power (W)	1500	2250	3000	3750	4200
Max. DC Voltage (V)	500	500	500	500	500
MPPT Voltage Range (V)	50-500	50-500	50-500	50-500	50-500
MPPT Full Power Voltage Range (V)	70-500	110-500	145-500	180-500	220-500
Rated Input Voltage (V)	360				
Start-up Voltage (V)	50				
Max. Input Current (A)	14				
Max. Short Current (A)	18				
No. of MPP Tracker / No. of PV String	1/1				
Input Connector Type	MC4				

AC Output Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
Max. Apparent Power (VA)	1000	1500	2000	2500	3000
Max. Output Power (W)	1000	1500	2000	2500	3000
Nominal Output Power (W)	1000	1500	2000	2500	3000
Max. Output Current (A)	6	9	12	13	15
Nominal Output Voltage (V)	L/N/PE, 220Vac, 230Vac, 240Vac				
Grid Voltage Range	180Vac-276Vac (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	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
Max. Efficiency	97.50%	97.80%	98.10%	98.10%	98.13%
Euro Efficiency	96.60%	96.70%	96.80%	97.23%	97.56%

Protection	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
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 III)				
Smart IV Curve Scaning	YES				
Quick Arc Fault Circuit Interruption	Optional				

General Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
Dimensions (H x W x D, mm)	260 x 280 x 116				
Weight (kg)	6				
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				
Noise Emission (db)	<21				
Night Power Consumption (W)	<0.2		<1		
Max. Operation Altitude (m)	4000				

Certifications and Standards	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1
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				

Residential HNS series

HNS-TL

3-5 kW

The Afore HNS Series Single-phase inverters are designed for residential PV system applications, rating from 3kW to 6kW. 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.

The inverter menu is activated by sensor touch buttons. 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.

ANTI-FLOW
Anti-Feed-in Function

PV OVERSIZE
Max. 1.5 time
PV Oversize Capacity

PROTECTION
Multiple intelligent
Protections

SMART
Smart IV Curve Scanning

Wi-Fi
Wi-Fi Standard
Ethernet/GPRS Optional

CONFIGURATION
Quick & Easy
Config. via Wi-Fi

MODBUS
MODBUS
Communication Ready

- MPPT efficiency > 99.9%
- Two MPPT design
- Active and reactive power compensation, adjust power factor
- No fans design
- Quick and easy installation
- High-quality power output and low THDI

PV Input Data	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
Max. DC Power (W)	4500	5400	5400	6000	7000
Max. DC Voltage (V)	600	600	600	600	600
MPPT Voltage Range (V)	70-550	70-550	70-550	70-550	70-550
MPPT Full Power Voltage Range (V)	110-550	265-550	130-550	145-550	180-550
Rated Input Voltage (V)	360				
Start-up Voltage (V)	70				
Max. Input Current (A)	14 x 2	14	14 x 2		
Max. Short Current (A)	18 x 2	18	18 x 2		
No. of MPP Tracker / No. of PV String	2/2	1/1	2/2		
Input Connector Type	MC4				

AC Output Data	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
Max. Apparent Power (VA)	3000	3600	3600	4000	5000
Max. Output Power (W)	3000	3600	3600	4000	5000
Nominal Output Power (W)	3000	3600	3600	4000	5000
Max. Output Current (A)	15	17.5	17.5	20	24
Nominal Output Voltage (V)	L/N/PE, 220Vac, 230Vac, 240Vac				
Grid Voltage Range	180Vac-276Vac (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	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
Max. Efficiency	98.20%	98.20%	98.20%	98.20%	98.20%
Euro Efficiency	97.80%	97.82%	97.82%	97.85%	97.90%

Protection	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
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 III)				
Smart IV Curve Scaning	YES				
Quick Arc Fault Circuit Interruption	Optional				

General Data	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
Dimensions (H x W x D, mm)	358 x 360 x 142				
Weight (kg)	10				
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				
Noise Emission (db)	<28				
Night Power Consumption (W)	<1				
Max. Operation Altitude (m)	4000				

Certifications and Standards	HNS3000TL	HNS3600TL-1	HNS3600TL	HNS4000TL	HNS5000TL
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				

Residential HNS series

HNS-TL

6-10 kW

The Afore HNS Series Single-phase inverters are designed for residential PV system applications, rating from 6kW to 10kW. 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.

The inverter menu is activated by sensor touch buttons. 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.

ANTI-FLOW
Anti-Feed-in Function

PV OVERSIZE
Max. 1.5 time
PV Oversize Capacity

PROTECTION
Multiple intelligent
Protections

SMART
Smart IV Curve Scanning

Wi-Fi
Wi-Fi Standard
Ethernet/GPRS Optional

CONFIGURATION
Quick & Easy
Config. via Wi-Fi

MODBUS
MODBUS
Communication Ready

- MPPT efficiency > 99.9%
- Two MPPT design
- Active and reactive power compensation, adjust power factor
- No fans design
- Quick and easy installation
- High-quality power output and low THDI

PV Input Data	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
Max. DC Power (W)	8400	9800	11200	12600	14000
Max. DC Voltage (V)	600				
MPPT Voltage Range (V)	70-550				
MPPT Full Power Voltage Range (V)	220-550				
Rated Input Voltage (V)	360				
Start-up Voltage (V)	70				
Max. Input Current (A)	14 x 2	14+26		26+26	
Max. Short Current (A)	18 x 2	18+35		35+35	
No. of MPP Tracker / No. of PV String	2/2	2/3		2/4	
Input Connector Type	MC4				

AC Output Data	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
Max. Apparent Power (VA)	6000	7000	8000	9000	10000
Max. Output Power (W)	6000	7000	8000	9000	10000
Nominal Output Power (W)	6000	7000	8000	9000	10000
Max. Output Current (A)	28.7	33.6	38.3	45	50
Nominal Output Voltage (V)	L/N/PE, 220Vac, 230Vac, 240Vac				
Grid Voltage Range	180Vac-276Vac (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	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
Max. Efficiency	98.20%	98.20%	98.20%	98.32%	98.40%
Euro Efficiency	97.92%	97.95%	98.00%	98.00%	98.10%

Protection	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
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 III)				
Smart IV Curve Scaning	YES				
Quick Arc Fault Circuit Interruption	Optional				

General Data	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
Dimensions (H x W x D, mm)	510 x 370 x 192			535 x 370 x 192	
Weight (kg)	17			18	
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				
Noise Emission (db)	<40				
Night Power Consumption (W)	<1				
Max. Operation Altitude (m)	4000				

Certifications and Standards	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
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				

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

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

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 MPP Tracker / No. of PV String	2/2					
Input Connector Type	MC4					

AC Output Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
Max. Apparent Power (VA)	3000	4000	5000	6000	8000	10000
Max. Output Power (W)	3000	4000	5000	6000	8000	10000
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%					

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 Scaning	YES					
Quick Arc Fault Circuit Interruption	Optional					

General Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
Dimensions (H x W x D, mm)	510 x 370 x 167				510 x 370 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					
Noise Emission (db)	<30					
Night Power Consumption (W)	<1					
Max. Operation Altitude (m)	2000					

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	EN/IEC 62109-1/-2, UL1741, IEC 60068-2					
Grid-connection	EN50549-1, EN50438, RD 1699, UNE 217001, RD 413, IEC61727, IEC 62116, IEC 61683, VDE4105, IEEE1547, VDE0126, AS4777.2, NB/T 32004-2018					

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 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	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
Max. Apparent Power (VA)	12000	13000	15000	17000	20000	25000
Max. Output Power (W)	12000	13000	15000	17000	20000	25000
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%					

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 Scaning	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 192			535 x 370 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)	2000					

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	EN/IEC 62109-1/-2, UL1741, IEC 60068-2					
Grid-connection	EN50549-1, EN50438, RD 1699, UNE 217001, RD 413, IEC61727, IEC 62116, IEC 61683, VDE4105, IEEE1547, VDE0126, AS4777.2, NB/T 32004-2018					

Single Phase Hybrid Inverter

1 - 6 kW for Low Voltage Battery

The Afore AF low voltage Series storage Inverters are designed to increase energy independence for homeowners. The power range is from 1kW to 6kW, compatible with low voltage (40-60V) batteries.

Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from the public grid.

Thanks for the UPS function (switch time < 10ms), enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The AF low voltage Series storage inverters integrated with Arc Fault Circuit Interrupter (AFCI) and Rapid Shutdown.

Max. 1.5
PV OVERSIZE
1.5 Times PV Oversize

2 MPPT
MPPT CHANNELS
Up to 2 MPPT Channels

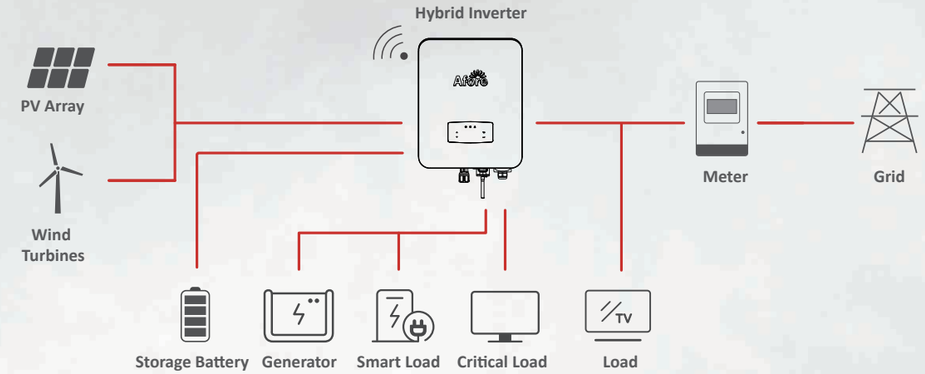
<10 ms
UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

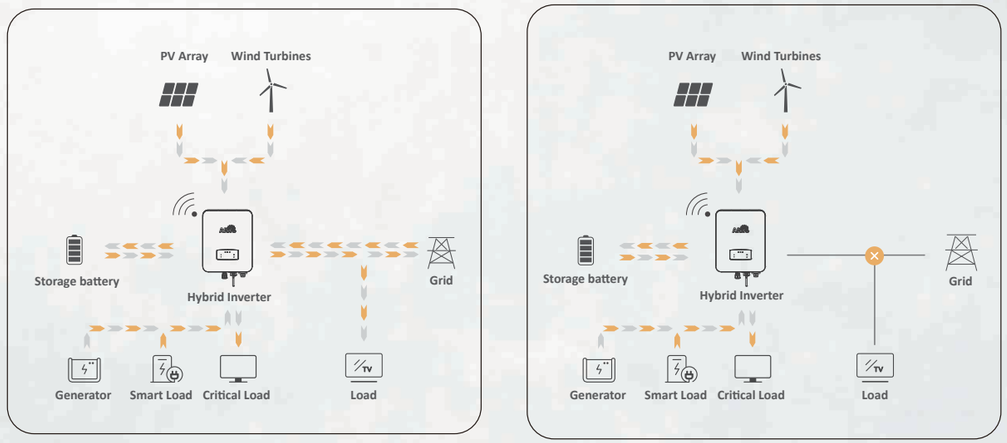
MULTIPLE INPUTS
Support Generator & Wind Turbines

- Support for Time-of-use Optimization
- Configurable Operation Modes
- Arc Fault Circuit Interrupter (AFCI)
- Build inAnti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

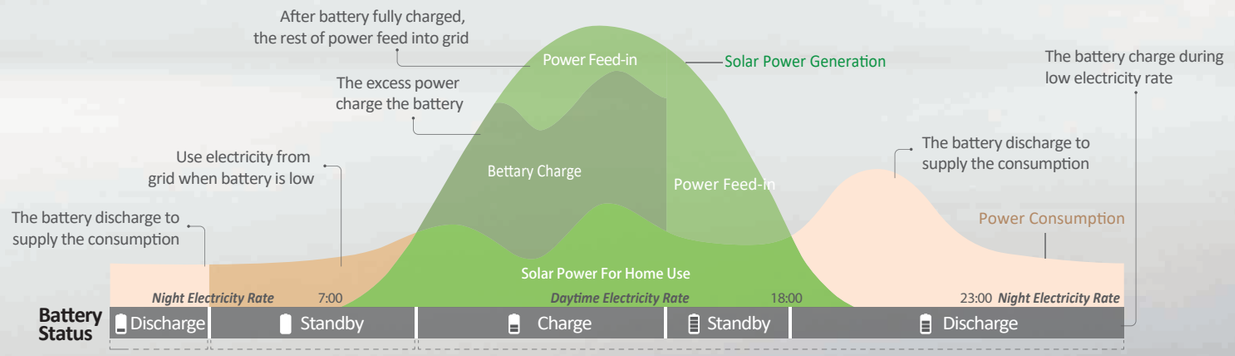


Optimizing Self-Consumption (on-grid) + Emergency Power Supply(off-grid)



Optimizing Self-Consumption Mode

With home energy storage installed, home owners may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



PV Input	AF1K-SL-1	AF1.5K-SL-1	AF2K-SL-1	AF2.5K-SL-1	AF3K-SL-1	AF3.6K-SL-1
Max. Input Power (kW)	1.5	2.3	3.0	3.8	4.5	5.4
Max. PV Voltage (V)	550					
MPPT Range (V)	80 - 500					
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500	170 - 500	210 - 500
Normal Voltage (V)	360					
Startup Voltage (V)	100					
Max. Input Current (A)	18.5 x 1					
Max. Short Current (A)	26 x 1					
No. of MPP Tracker / No. of PV String	1 / 1					
Battery Port						
Max. Charge/Discharge Power (kW)	1.0	1.5	2.0	2.5	3.0	3.6
Max. Charge/Discharge Current (A)	25	40	50	63	80	80
Battery Normal Voltage (V)	51.2					
Battery Voltage Range (V)	40 - 60					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0
Max Apparent Power (VA)	1.0	1.5	2.0	2.5	3.0	3.6
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Nominal Grid Current(A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1	16.4 / 15.7
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230					
Nominal Grid Frequency (Hz)	50 / 60					
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)					
Current THD (%)	< 3					
AC Load Output	**AF1K-SL-1**	**AF1.5K-SL-1**	**AF2K-SL-1**	**AF2.5K-SL-1**	**AF3K-SL-1**	**AF3.6K-SL-1**
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0
Max Apparent Power (VA)	1.0	1.5	2.0	2.5	3.0	3.6
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.3 / 16.6	20.5 / 19.6	24.6 / 23.5
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.8	4.5	5.4
Nominal AC Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1	16.4 / 15.7
Nominal AC Voltage L-N (V)	220 / 230					
Nominal AC Frequency (Hz)	50 / 60					
Switching Time (s)	Seamless					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	97.0					
Max. Efficiency (%)	97.6					
PV to Bat. Efficiency (%)	98.1					
Bat. between AC Efficiency (%)	96.8					
Protection	**AF1K-SL-1**	**AF1.5K-SL-1**	**AF2K-SL-1**	**AF2.5K-SL-1**	**AF3K-SL-1**	**AF3.6K-SL-1**
PV Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
Insulation Resister Detection	Yes					
PV Arc Detection	Yes					
Enclosure Protect Level	IP65 / NEMA4X					
General Data	**AF1K-SL-1**	**AF1.5K-SL-1**	**AF2K-SL-1**	**AF2.5K-SL-1**	**AF3K-SL-1**	**AF3.6K-SL-1**
Dimensions (L x W x H, mm)	513 x 370 x 192					
Weight (kg)	17					
Topology	Non-isolated (no isolation between PV - AC, isolation between battery - AC)					
Cooling	Intelligent Fan					
Relatively Humidity	0 - 100 %					
Operating Temperature Range (°C)	- 25 to 60					
Operating Altitude (m)	< 4000					
Noise Emission (dB)	< 25					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS97, G98/G99, EN50549-1, C10/C11, AS 4777, VDE-AR-N4105, VDE0126, IEC62040, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

PV Input	AF3K-SL	AF3.6K-SL	AF4K-SL	AF4.6K-SL	AF5K-SL	AF5.5K-SL	AF6K-SL
Max. Input Power (kW)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Max. PV Voltage (V)	550						
MPPT Range (V)	80 - 500						
Full MPPT Range (V)	90 - 500	110 - 500	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (V)	360						
Startup Voltage (V)	100						
Max. Input Current (A)	18.5 x 2						
Max. Short Current (A)	26 x 2						
No. of MPP Tracker / No. of PV String	2 / 2						
Battery Port							
Max. Charge/Discharge Power (kW)	3.0	3.6	4.0	4.6	4.8	4.8	4.8
Max. Charge/Discharge Current (A)	80						
Battery Normal Voltage (V)	51.2						
Battery Voltage Range (V)	40 - 60						
Battery Type	Li-ion / Lead-acid etc.						
AC Grid							
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Apparent Power (VA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current(A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230						
Nominal Grid Frequency (Hz)	50 / 60						
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)						
Current THD (%)	< 3						
AC Load Output	**AF3K-SL**	**AF3.6K-SL**	**AF4K-SL**	**AF4.6K-SL**	**AF5K-SL**	**AF5.5K-SL**	**AF6K-SL**
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Apparent Power (VA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	20.5 / 19.6	24.6 / 23.5	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Nominal AC Current (A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal AC Voltage L-N (V)	220 / 230						
Nominal AC Frequency (Hz)	50 / 60						
Switching Time (s)	Seamless						
Voltage THD (%)	< 3						
Efficiency							
CEC Efficiency (%)	97.0						
Max. Efficiency (%)	97.6						
PV to Bat. Efficiency (%)	98.1						
Bat. between AC Efficiency (%)	96.8						
Protection	**AF3K-SL**	**AF3.6K-SL**	**AF4K-SL**	**AF4.6K-SL**	**AF5K-SL**	**AF6K-SL**	**AF6K-SL**
PV Reverse Polarity Protection	Yes						
Over Current/Voltage Protection	Yes						
Anti-Islanding Protection	Yes						
AC Short Circuit Protection	Yes						
Residual Current Detection	Yes						
Ground Fault Monitoring	Yes						
Insulation Resister Detection	Yes						
PV Arc Detection	Yes						
Enclosure Protect Level	IP65 / NEMA4X						
General Data	**AF3K-SL**	**AF3.6K-SL**	**AF4K-SL**	**AF4.6K-SL**	**AF5K-SL**	**AF6K-SL**	**AF6K-SL**
Dimensions (L x W x H, mm)	513 x 370 x 192						
Weight (kg)	17						
Topology	Non-isolated (no isolation between PV - AC, isolation between battery - AC)						
Cooling	Intelligent Fan						
Relatively Humidity	0 - 100 %						
Operating Temperature Range (°C)	- 25 to 60						
Operating Altitude (m)	< 4000						
Noise Emission (dB)	< 25						
Standby Consumption (W)	< 10						
Mounting	Wall Bracket						
Communication with RSD	SUNSPEC						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS97, G98/G99, EN50549-1, C10/C11, AS 4777, VDE-AR-N4105, VDE0126, IEC62040, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						

AC Coupled Inverter

1-4.6 kW

Afore AC Coupled Inverter (1kW-4.6kW) suitable for both single-phase & three-phase systems. It can be fitted alongside string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.

SEAMLESSLY SWITCH
Seamlessly Switch Time between EPS with Grid

SMART
Smart EMS/BMS

UNIBODY
One-piece Aluminum Housing

SAFETY
Proven Safety

MAX. 80A
Max. 80A Battery Charge and Discharge Current

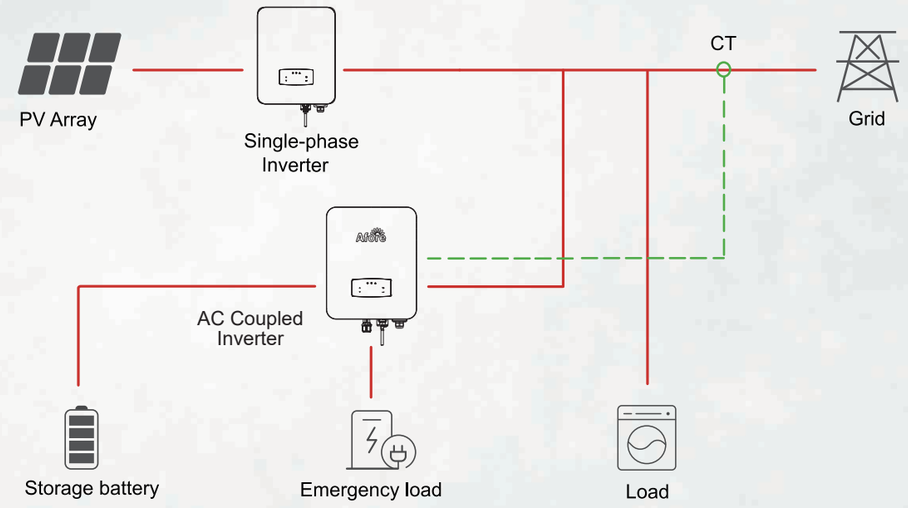
SUPPORT
Island support

- 97.6% High Frequency Isolation Charge and Discharge Efficiency
- Integrated WIFI Monitoring & Remote Parameter Setting
- Plug & Play, Easy Maintenance
- IP 65 Water-resistant & Dustproof

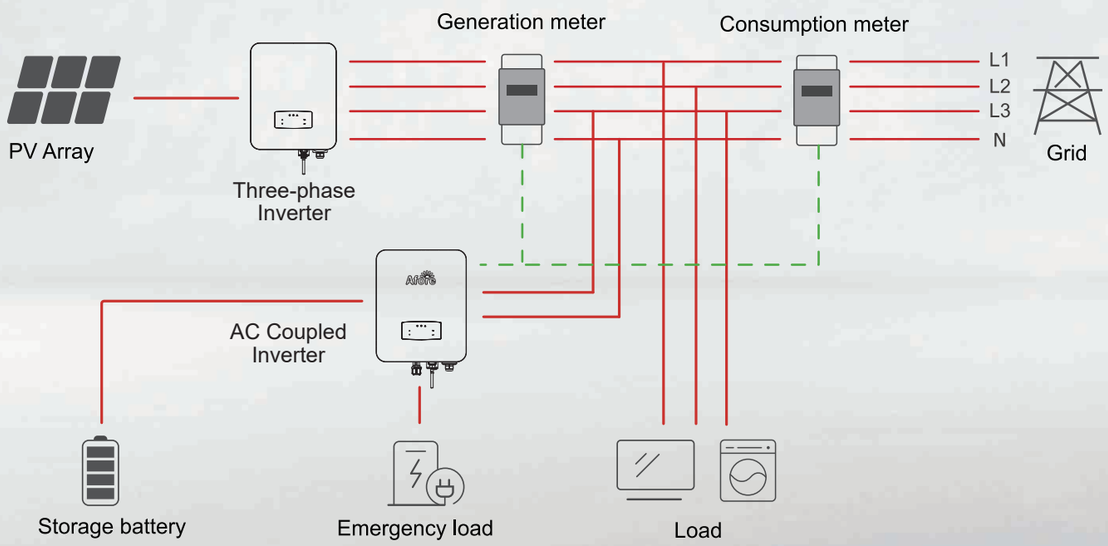
Retrofitting Storage Solution on Existing Solar System:

Adding battery storage to an existing solar system enables home owners to store their solar PV generated electricity instead of exportingit to the grid. More savings on your electricity bill.

Single Phase AC Coupled(Retro Fit)



Three Phase AC Coupled(Retro Fit)



Battery	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0
Max. Charge/Discharge Power (kW)	1	1.5	2.0	2.5
Max. Charge/Discharge Current (A)	25	40	50	63
Battery Normal Voltage (V)	51.2			
Battery Voltage Range (V)	40 - 60			
Battery Type	Li-ion/lead-acid etc.			

AC Grid				
Max Continuous Current (A)	5.0	7.0	10.0	12.0
Max Apparent Power (VA)	1.0	1.5	2.0	2.5
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5
Nominal Grid Current(A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230			
Nominal Grid Frequency (Hz)	50 / 60			
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)			
Current THD (%)	< 3			

AC Load Output	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0
Max Continuous Current (A)	5.0	7.0	10.0	12.0
Max Apparent Power (VA)	1.0	1.5	2.0	2.5
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.1 / 16.4
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.75
Nominal AC Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9
Nominal AC Voltage L-N (V)	220 / 230			
Nominal AC Frequency (Hz)	50 / 60			
Switching Time (s)	Seamless			
Voltage THD (%)	< 3			

Efficiency	
Max. Efficiency (%)	97.6
Bat. between AC Efficiency (%)	96.8

Protection	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0
Over Current/Voltage Protection	Yes			
Anti-Islanding Protection	Yes			
AC Short Circuit Protection	Yes			
Residual Current Detection	Yes			
Ground Fault Monitoring	Yes			
Insulation Resister Detection	Yes			
Enclosure Protect Level	IP65 / NEMA4X			

General Data	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0
Dimensions (L x W x H, mm)	513 x 370 x 192			
Weight	17			
Topology	Isolated			
Cooling	Intelligent Fan			
Relatively Humidity	0 - 100 %			
Operating Temperature Range (°C)	- 25 to 60			
Operating Altitude (m)	< 4000			
Noise Emission (dB)	< 25			
Standby Consumption (W)	< 10			
Mounting	Wall Bracket			
Communication with RSD	SUNSPEC			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NRS97, G98/G99, EN50549-1, C10/C11, AS 4777, VDE-AR-N4105, VDE0126, IEC62040, IEC62109-1, IEC62109-2			
EMC	EN61000-6-2, EN61000-6-3			

Battery	AF3K-SL-0	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0
Max. Charge/Discharge Power (kW)	3.0	3.6	4.0	4.6
Max. Charge/Discharge Current (A)	80	80	80	80
Battery Normal Voltage (V)	51.2			
Battery Voltage Range (V)	40 - 60			
Battery Type	Li-ion/lead-acid etc.			

AC Grid				
Max Continuous Current (A)	14.0	17.0	19.0	22.0
Max Apparent Power (VA)	3.0	3.6	4.0	4.6
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6
Nominal Grid Current(A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230			
Nominal Grid Frequency (Hz)	50 / 60			
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)			
Current THD (%)	< 3			

AC Load Output	AF3K-SL-0	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0
Max Continuous Current (A)	14.0	17.0	19.0	22.0
Max Apparent Power (VA)	3.0	3.6	4.0	4.6
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6
Max Peak Current (A) (10min)	20.5 / 19.6	24.6 / 23.5	27.3 / 26.1	31.4 / 30.0
Max Peak Power (kVA) (10min)	4.5	5.4	6.0	6.9
Nominal AC Current (A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0
Nominal AC Voltage L-N (V)	220 / 230			
Nominal AC Frequency (Hz)	50 / 60			
Switching Time (s)	Seamless			
Voltage THD (%)	< 3			

Efficiency	
Max. Efficiency (%)	97.6
Bat. between AC Efficiency (%)	96.8

Protection	AF3K-SL-0	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0
Over Current/Voltage Protection	Yes			
Anti-Islanding Protection	Yes			
AC Short Circuit Protection	Yes			
Residual Current Detection	Yes			
Ground Fault Monitoring	Yes			
Insulation Resister Detection	Yes			
Enclosure Protect Level	IP65 / NEMA4X			

General Data	AF3K-SL-0	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0
Dimensions (L x W x H, mm)	513 x 370 x 192			
Weight	17			
Topology	Isolated			
Cooling	Intelligent Fan			
Relatively Humidity	0 - 100 %			
Operating Temperature Range (°C)	- 25 to 60			
Operating Altitude (m)	< 4000			
Noise Emission (dB)	< 25			
Standby Consumption (W)	< 10			
Mounting	Wall Bracket			
Communication with RSD	SUNSPEC			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NRS97, G98/G99, EN50549-1, C10/C11, AS 4777, VDE-AR-N4105, VDE0126, IEC62040, IEC62109-1, IEC62109-2			
EMC	EN61000-6-2, EN61000-6-3			