

Single Phase AC Coupled Inverter

1-6 kW



Afore AC coupled inverter (1kW-6kW) is suitable for both single-phase & three-phase systems. It can be fitted alongside with 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



Plug & Play, Easy Maintenance

Integrated WIFI Monitoring & Remote Parameter Setting

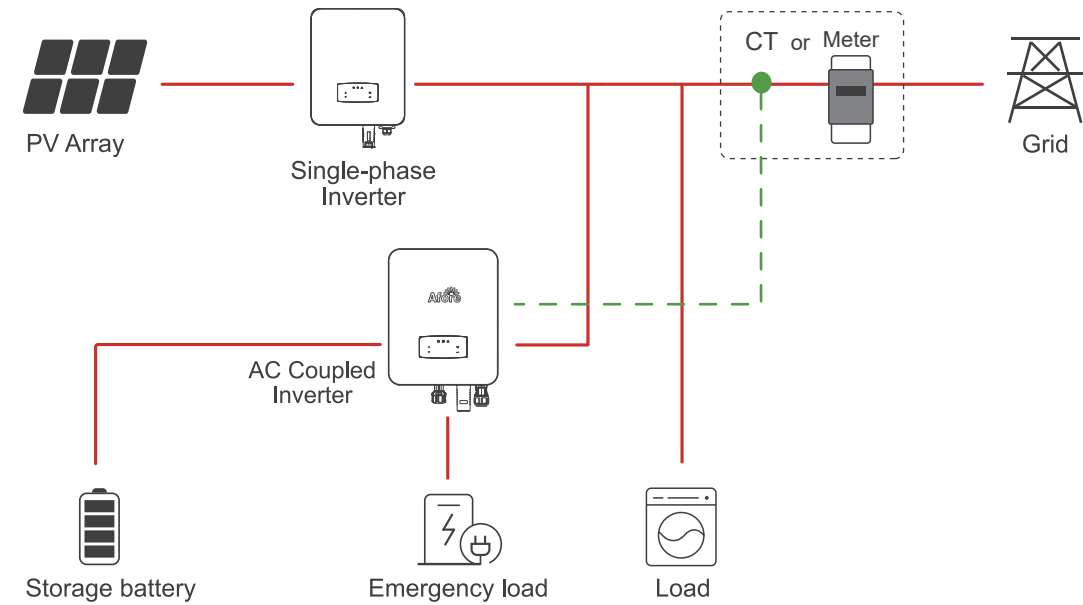


IP 65 Water-resistant & Dustproof

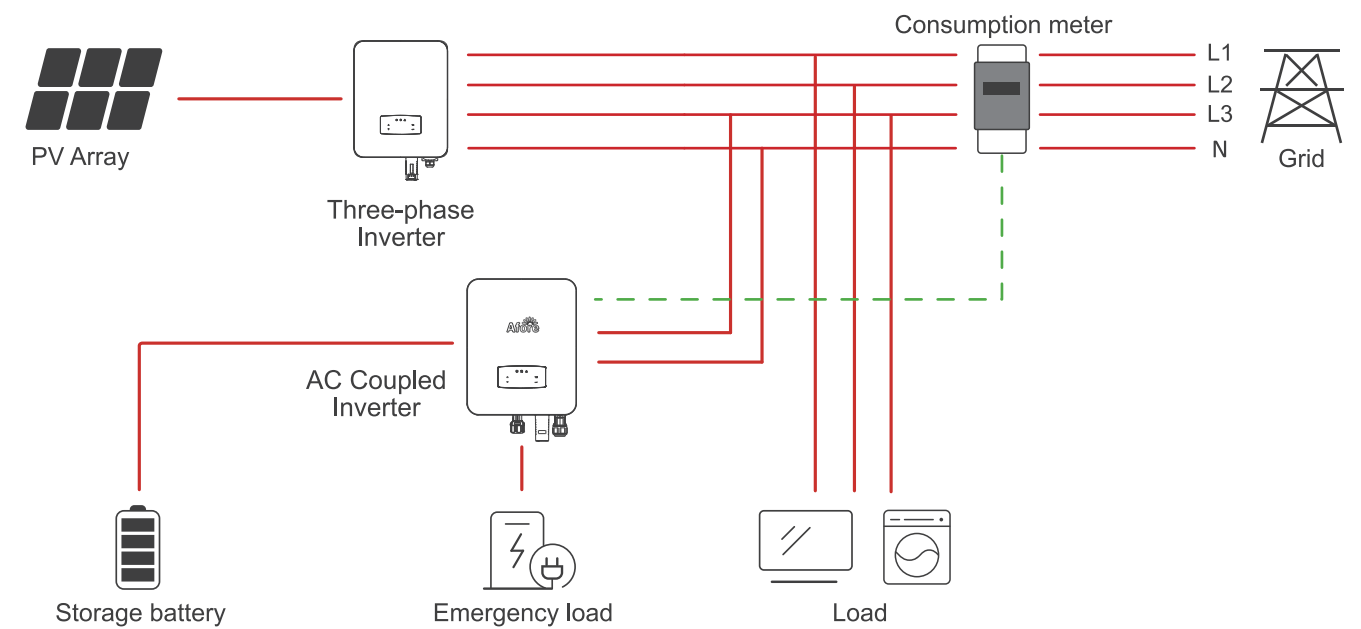
Retrofitting Storage Solution on Existing Solar System:

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

Single Phase AC Coupled (Retro Fit)



Three Phase AC Coupled (Retro Fit)



■ Technical Data	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0	AF3K-SL-0
Battery Port					
Max. Charge/Discharge Power (kW)	1	1.5	2.0	2.5	3.0
Max. Charge/Discharge Current (A)	25	40	50	63	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
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0
Nominal Grid Current(A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1
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					
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.1 / 16.4	20.5 / 19.6
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.75	4.5
Nominal AC Voltage L-N (V)	220 / 230				
Nominal AC Frequency (Hz)	50 / 60				
Switching Time (ms)	Seamless				
Voltage THD (%)	< 3				
Efficiency					
Max. Efficiency (%)	97.6				
Bat. between AC Efficiency (%)	96.8				
Protection					
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					
Dimensions (W x H x D, mm)	370 x 535 x 192				
Weight	18.5				
Topology	Tranformerless				
Cooling	Intelligent Fan				
Relative 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	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2				
EMC	EN61000-6-2, EN61000-6-3				

■ Technical Data	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0	AF5K-SL-0	AF5.5K-SL-0	AF6K-SL-0
Battery Port						
Max. Charge/Discharge Power (kW)	3.6	4.0	4.6	5.0	5.5	6.0
Max. Charge/Discharge Current (A)	80	120	120	120	120	120
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)	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	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						
Max Continuous Current (A)	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.6	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	24.6 / 23.5	27.3 / 26.1	31.4 / 30.0	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	5.4	6.0	6.9	7.5	8.3	9.0
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						
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						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight	18.5					20.5
Topology	Tranformerless					
Cooling	Intelligent Fan					
Relative 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	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Three Phase AC Coupled Inverter

3-30 kW

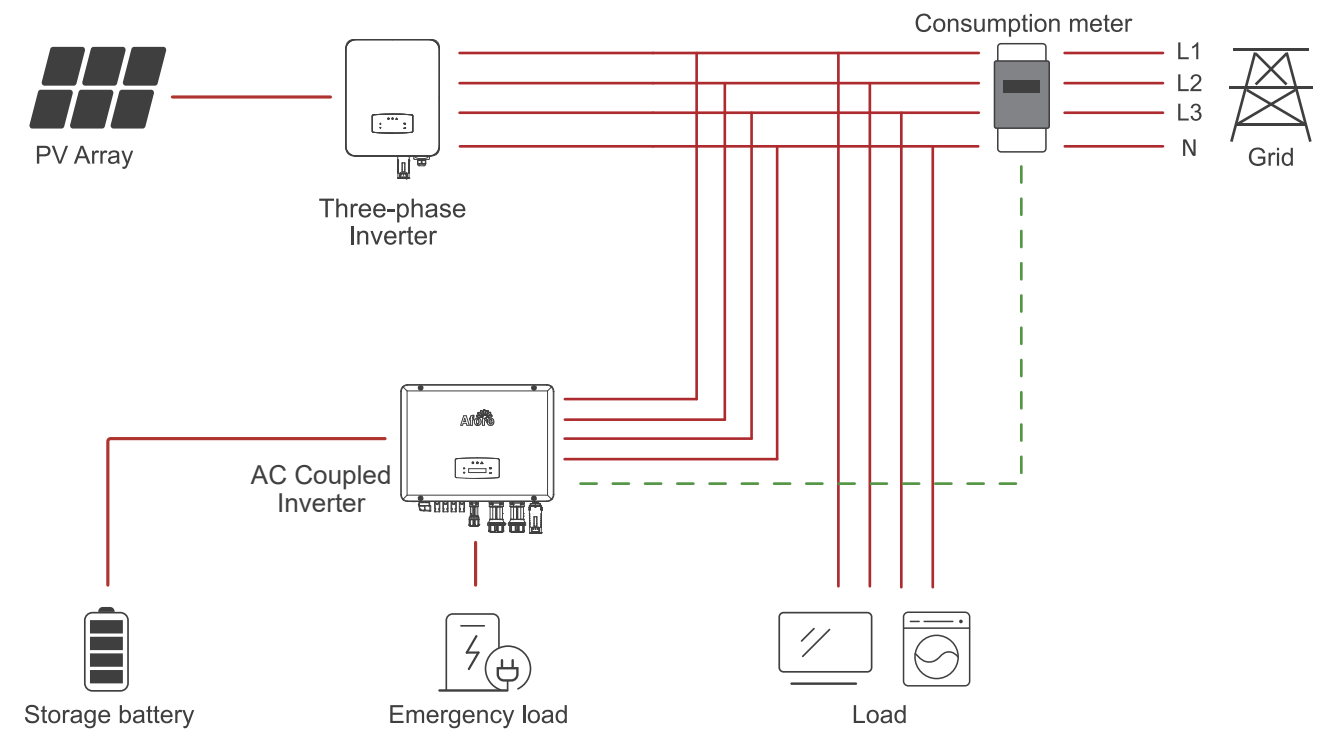


Afore AC coupled inverter (3-30kW) is suitable for three-phase systems. It can be fitted alongside with string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.

Retrofitting Storage Solution on Existing Solar System:

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

Three Phase AC Coupled (Retro Fit)



- SODIUM METAL CHLORIDE BATTERY**
Support Sodium metal chloride battery
- WIDE RANGE**
Voltage Range (150-800V)
- MAX. 60A**
Max. Charge/Discharge Current 60A
- 100% UNBALANCE**
Support Unbalance Load
- UPS FUNCTION**
Switch Time < 10ms
- SMART**
Smart EMS/BMS
- SUPPORT**
Island support

- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- 100% unbalanced output, each phase;
200% unbalanced output, each phase ($\leq 10kW$)
- Smart Monitoring & Remote Firmware Upgrade

Technical Data AF3K-TH-0 AF4K-TH-0 AF5K-TH-0 AF6K-TH-0 AF8K-TH-0 AF10K-TH-0

Battery Port						
Battery Nominal Voltage (V)	200	200	200	250	300	400
Battery Voltage Range (V)	150-800					
Max. Charge/Discharge Current (A)	30					
Max. Charge/Discharge Power (kW)	3 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6	8 / 8.8	10 / 11
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery					

AC Grid						
Nominal AC Output Power (kW)	3	4	5	6	8	10
Max. AC Input/Output Power (kVA)	4.5 / 3	6 / 4	7.5 / 5	9 / 6	12 / 8	15 / 10
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17
Nominal AC Voltage (V)	230/400					
Nominal AC Frequency (Hz)	50/60					
Power Factor	1 (-0.8-0.8) adjustable					
Current THD (%)	<3%					

AC Load Output (Back-up)						
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					

Efficiency						
Max. Efficiency	98.00%		98.20%			

Protection						
Reverse Polarity Protection	Yes					
Over Current / Voltage Protection	Yes					
Anti-islanding Protection	Yes					
AC Short-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
Protective class	Class I					
Overvoltage category	OVC III (AC Main)					

General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192 mm					
Weight (kg)	20.8kg					
Topology	Transformerless					
Cooling Concept	Natural Convection			Intelligent Fan		
Relative Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<40					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data AF12K-TH-0 AF15K-TH-0 AF17K-TH-0 AF20K-TH-0 AF25K-TH-0 AF30K-TH-0

Battery Port						
Battery Nominal Voltage (V)	450	500	400	500	500	550
Battery Voltage Range (V)	150-800					
Max. Charge/Discharge Current (A)	30	50	50	50	60	60
Max. Charge/Discharge Power (kW)	12 / 13.2	15 / 16.5	17 / 18.7	20 / 22	25 / 27.5	30 / 33
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery					

AC Grid						
Nominal AC Output Power (kW)	12	15	17	20	25	30
Max. AC Input/Output Power (kVA)	18 / 12	22.5 / 15	25.5 / 17	30 / 20	37.5 / 25	45 / 30
Max. AC Output Current (A)	21.5	27	30	32	40	48
Nominal AC Voltage (V)	230/400					
Nominal AC Frequency (Hz)	50/60					
Power Factor	1 (-0.8-0.8) adjustable					
Current THD (%)	<3%					

AC Load Output (Back-up)						
Nominal Output Power (VA)	12000	15000	17000	20000	25000	30000
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	17.4	21.8	24.8	29	36.3	43.5
Peak Output Power	13200VA, 60s	16500VA, 60s	18700VA, 60s	22000VA, 60s	27500VA, 60s	33000VA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					

Efficiency						
Max. Efficiency	98.30%		98.50%			

Protection						
Reverse Polarity Protection	Yes					
Over Current / Voltage Protection	Yes					
Anti-islanding Protection	Yes					
AC Short-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
Protective class	Class I					
Overvoltage category	OVC III (AC Main)					








General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192	558 x 535 x 260 mm				
Weight (kg)	20.8kg	29kg	36kg			
Topology	Transformerless					
Cooling Concept	Intelligent Fan					
Relative Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<40					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					







Three Phase AC Coupled Inverter

3-12 kW Plus Series



Afore AC coupled inverter (3-12kW) is suitable for three-phase systems. It can be fitted alongside with string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.

						
SODIUM METAL CHLORIDE BATTERY Support Sodium metal chloride battery	MIN. 80V Battery Voltage Minimum 80V	MAX. 50A Max. Charge/ Discharge Current 50A	100% UNBALANCE Support Unbalance Load	<10 ms UPS FUNCTION Switch Time < 10ms	SMART Smart EMS/BMS	SUPPORT Island support

Support for Time-of-use Optimization 	 Build in Anti-feed-in Function
Configurable Operation Modes 	 100% unbalanced output, each phase; 200% unbalanced output, each phase (≤ 10kW)
AFCI (Optional) & Rapid Shutdown Ready 	 Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF3K-THP-0	AF4K-THP-0	AF5K-THP-0	AF6K-THP-0	AF8K-THP-0	AF10K-THP-0	AF12K-THP-0
Battery Port							
Battery Nominal Voltage (V)	100	100	100	150	200	250	300
Battery Voltage Range (V)	80-600			120-650			
Max. Charge/Discharge Current (A)	50			50			
Max. Charge/Discharge Power (kW)	3 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6	8 / 8.8	10 / 11	12 / 13.2
Charging Curve	3 Stages						
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery						
AC Grid							
Nominal AC Output Power (kW)	3	4	5	6	8	10	12
Max. AC Input/Output Power (kVA)	4.5 / 3	6 / 4	7.5 / 5	9 / 6	12 / 8	15 / 10	18 / 12
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17	21.5
Nominal AC Voltage (V)	230/400						
Nominal AC Frequency (Hz)	50/60						
Power Factor	1 (-0.8-0.8)						
Current THD (%)	<3%						
AC Load Output (Back-up)							
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000
Nominal Output Voltage (V)	230/400						
Nominal Output Frequency (Hz)	50/60						
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5	17.4
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s
THDV (with linear load)	<3%						
Switching Time (ms)	<10						
Efficiency							
Max. Efficiency	98.00%			98.20%		98.30%	
Protection							
Reverse Polarity Protection	Yes						
Over Current / Voltage Protection	Yes						
Anti-islanding Protection	Yes						
AC Short-circuit Protection	Yes						
Leakage Current Detection	Yes						
Ground Fault Monitoring	Yes						
Grid Monitoring	Yes						
Enclosure Protect Level	IP65						
Protective class	Class I						
Overtoltage category	OVC III (AC Main)						
General Data							
Dimensions (W x H x D, mm)	558 x 535 x 260 / 370 x 497 x 192 mm						
Weight (kg)	29 / 20.8kg						
Topology	Transformerless						
Cooling Concept	Intelligent Fan						
Relative Humidity	0-100%						
Operating Temperature Range (°C)	-25 to 60 °C						
Operating Altitude (m)	<4000						
Noise Emission (dB)	<40						
Standby Consumption (W)	<5						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						