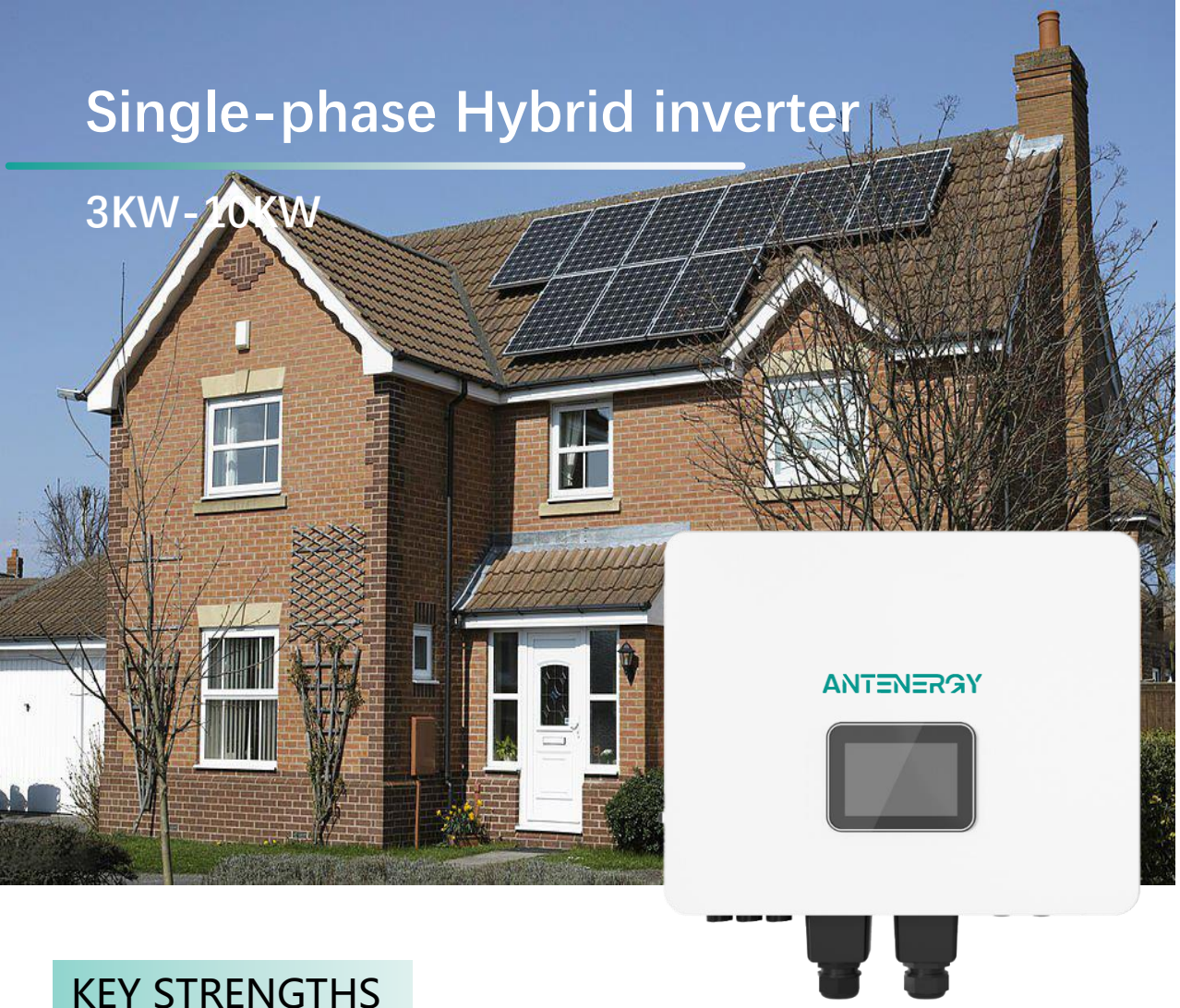
ANTENERGY

Hybrid Inverter

Single-phase Hybrid inverter

3KW-10KW



KEY STRENGTHS

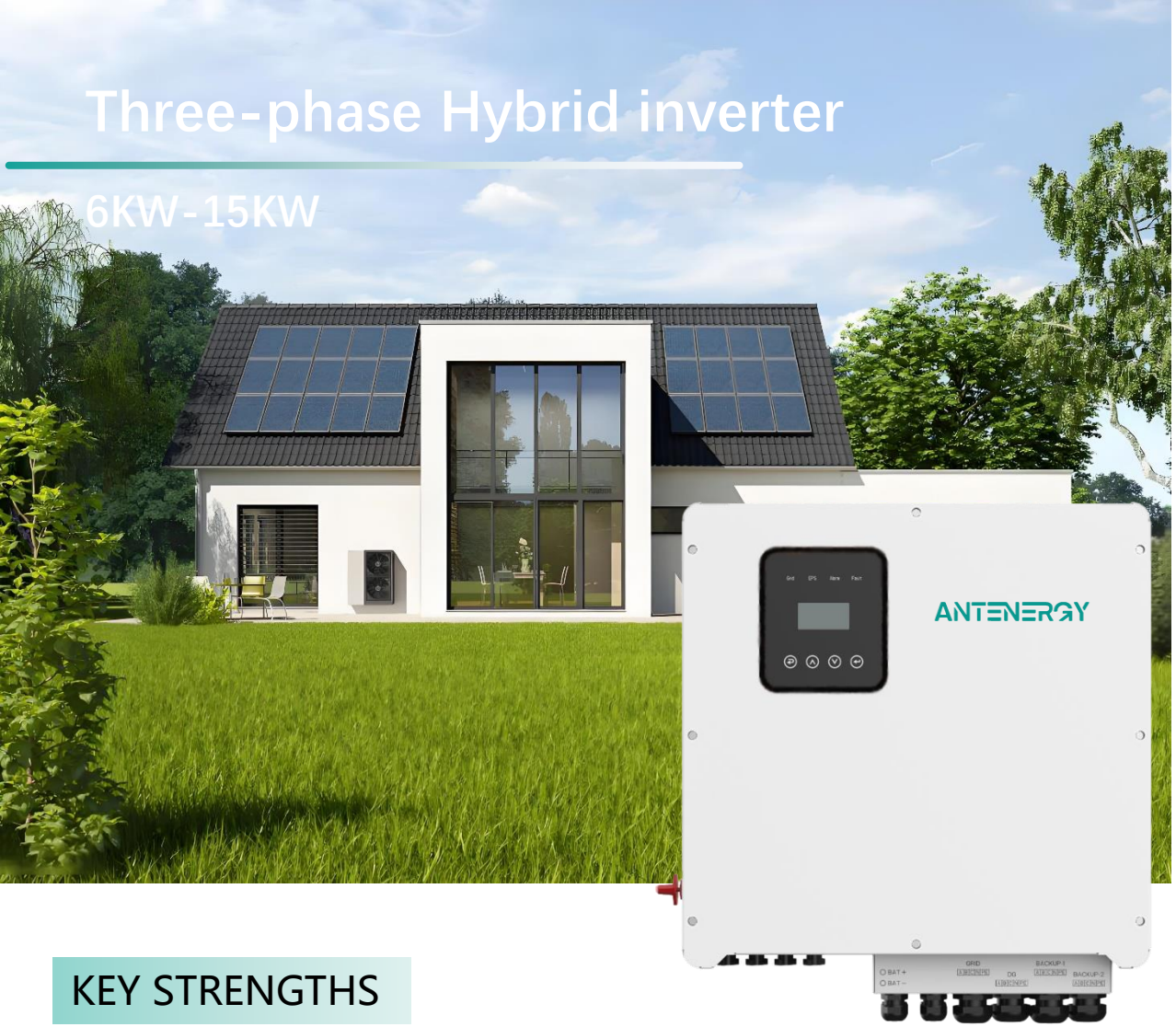
- Support on/off-grid AC coupling function
- Support intelligent load management (customized)
- Optimized EMC design, more stable operation
- Support BMS remote upgrade function (customized)
- Support three-phase and multi-machine parallel connection

SPECIFICATIONS

Model	R3KL1DA-G2S	R4KL1DA-G2S	R5KL1DA-G2S	R6KL1DA-G2S	R8KL1DA-G2S	R10KL1DA-G2S
PV input data						
Max. PV input power (kW)	4.5	6	7.5	9	12	15
Max. PV input voltage (V)	550					
Start-up voltage (V)	100					
MPPT voltage range (V)	100~430					
Rated PV input voltage (V)	360					
No. of MPPT trackers	2					
No. of strings per MPPT tracker	1/1				1/2	
Max. input current per MPPT (A)	16/16				16/16+16	
Max. short-circuit current per MPPT (A)	24/24				24/24/24	
Battery input data						
Battery type	Lithium-ion / Lead-acid					
Max. charge / discharge power (kW)	**3**	**4**	**5**	**6**	**8**	**10**
Battery voltage range (V)	40~58					
Battery voltage range@full-load (V)	160-550					
Rated battery voltage (V)	48					
Max. charging / discharging current (A)	60/60	80/80	100/100	120/120	160/160	200/200
Rated charge / discharge current (A)	60/60	80/80	100/100	120/120	160/160	200/200
Charging strategy for Li-Ion battery	Self-adaption to BMS					
BMS communication	CAN					
AC output data (grid side)						
Rated output power (kW)	3	4	5	6	8	10
Max. apparent output power (kVA)	3.3	4.4	5	6.6	8.8	10
Max. apparent input power(kVA)	3.3	4.4	5	6.6	8.8	10
Rated grid voltage (V)	230					
Grid voltage range (V)	176~270					
Grid input voltage (V)	230					
Rated grid frequency (Hz)	50/60					
Grid frequency range(Hz)	47~61					
Rated output current (A)	13	17.4	21.7	26.1	34.8	43.5
Max. AC output current (A)	14.3	19.1	21.7	28.7	38.3	43.5
Max. apparent input current (A)	14.3	19.1	21.7	28.7	38.3	43.5
Power factor	1 (0.8 leading - 0.8 lagging)					
Max. grid passthrough current(A)	19.56	26.08	32.6	39.1	43.5	
THDi	< 3%					
Grid type	L+N+PE					
AC output data (back-up)						
Rated output power (kW)	3	4	5	6	8	10
Max. apparent output power (kVA)	3.3	4.4	5	6.6	8.8	10
Rated output voltage (V)	230					
Rated output frequency (Hz)	50/60					
Rated output current (A)	13	17.4	21.7	26.1	34.8	43.5
Max. AC output current (A)	14.3	19.1	21.7	28.7	38.3	43.5
Peak output power	≥110%, 10mins; ≥120%, 1min; ≥130%, 1s; ≥150%, 100ms					
Back-up switch time (ms)	<20					
THDu	<3%					
Protection						
Supported protection	PV reverse polarity protection, Anti-islanding protection, Ground fault protection,Leakage current protection, Insulation resistance detection, Backup output short circuit protection, AC under-voltage protection, AC output over-current protection, AC over-voltage protection					
Surge protection	DC Type III / AC Type III					
Over voltage category	DC Type III / AC Type III					
Certifications and standards						
Certificates	ENIEC 61000-6-1:2019, EN IEC 61000-6-3:2021; EN 62109-1:2010; EN 62109-2:2011					
General data						
Ingress protection	IP65					
Operating temperature range (℃)	(-25~+60)					
Cooling	Natural convection					
Relative humidity (m)	0-95% (non-condensing)					
Operating altitude (m)	0~2000m (derating over 2000m)					
Dimensions W*D*H (mm)	476×215×477 (without generator port); 476×215×510 (with generator port)					486×231×530
Weight (kg)	20.5 (without generator port); 20.7 (with generator port)					25.8
Topology (solar / battery)	Transformerless / Transformerless					
Noise emission (dB)	<35					<55
PV connection terminals	MC4					
Display and communication						
Display	LCD					
Communication	485/CAN					

Three-phase Hybrid inverter

6KW-15KW

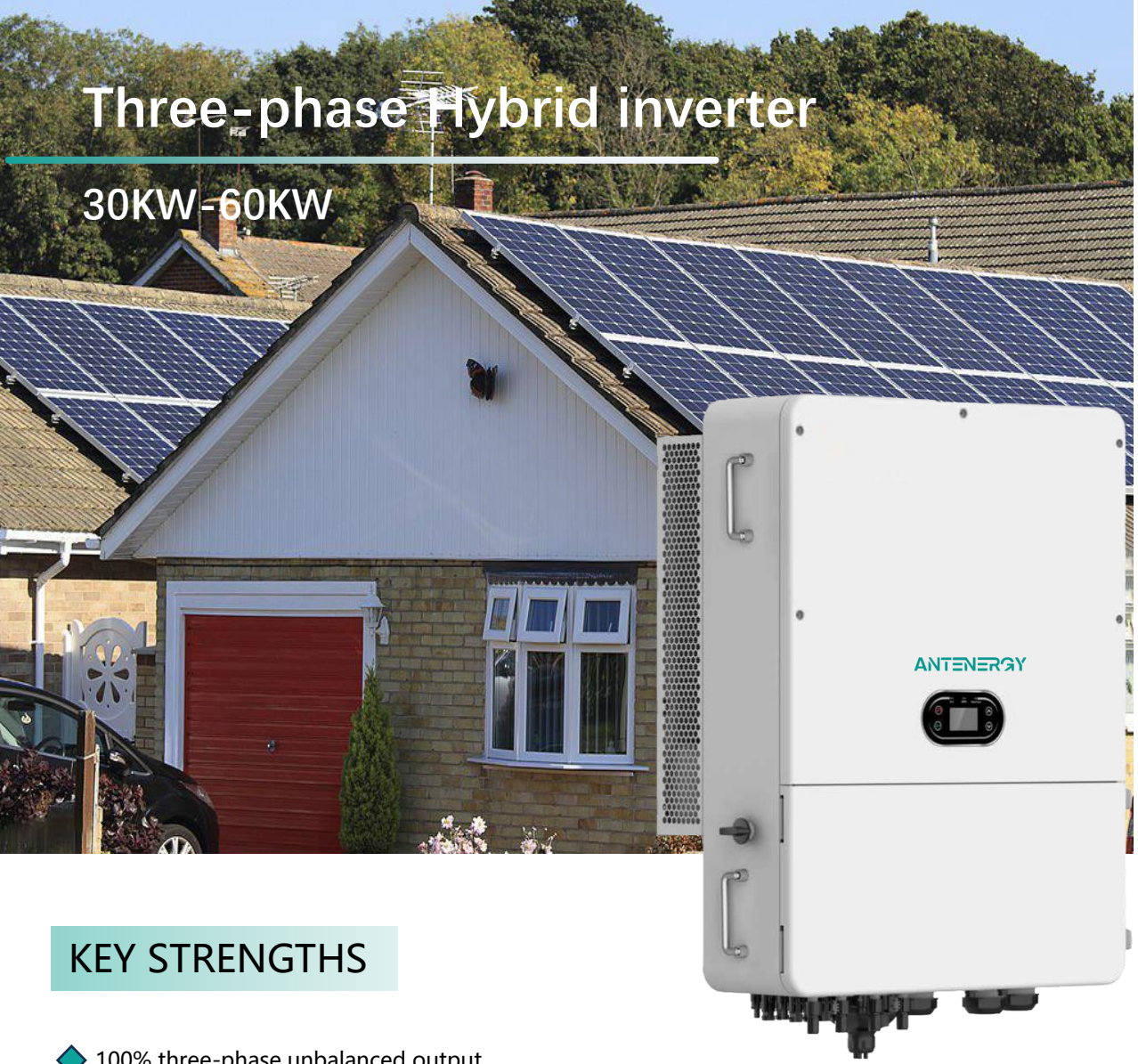


KEY STRENGTHS

- Support BMS (RS485) remote upgrade.
- Support full power discharge, automatic battery charge and discharge management
- Compatible with single-phase and three-phase loads.
- Support 100% unbalanced load output.
- Support high power components.

SPECIFICATIONS

Model	R6KH3-P	R8KH3-P	R10KH3-P	R12KH3-P	R15KH3-P
PV input data					
Max. PV input power (kW)	9	12	15	18	22.5
Max. PV input voltage (V)			1000		
Min. PV input voltage (V)			125		
Start-up voltage (V)			125		
MPPT voltage range (V)			180~850		
MPPT voltage range@full-load (V)			250~850		
Rated PV input voltage (V)			600		
No. of MPPT trackers			2		
No. of strings per MPPT tracker			1/1		2/2
Max. input current per MPPT (A)			18/18		20/20
Max. short-circuit current per MPPT (A)			25/25		30/30
Battery input data					
Battery type			Lithium-ion / Lead-acid		
Max. charge / discharge power (kW)	6.6	8.8	11	13.2	16.5
Battery voltage range (V)			150~550		
Battery voltage range@full-load (V)	180-550	230-550	285-550	340-550	425-550
Max. charging / discharging current (A)			50/50		
Rated charge / discharge current (A)			1540/400~550		
Charging strategy for Li-Ion battery			Self-adaption to BMS		
BMS communication			CAN		
AC output data (grid side)					
Rated output power (kW)	**6**	**8**	**10**	**12**	**15**
Max. apparent output power (kVA)	6.6	8.8	11	13.2	16.5
Max. apparent input power(kVA)	13.2	17.6	22	26.4	33.3
Rated grid voltage (V)			220 / 380; 230 / 400		
Grid voltage range (V)			187~264.5		
Grid input voltage (V)			380; 400		
Rated grid frequency (Hz)			50/60		
Grid frequency range(Hz)			45-55 / 55-65		
Rated output current (A)	8.7	11.5	14.4	17.3	21.7
Max. AC output current (A)	9.5	12.7	15.9	19.1	23.8
Power factor			0.99 (0.8 leading - 0.8 lagging)		
THDi			< 3%		
Grid type			3L+N+PE		
AC output data (back-up)					
Rated output power (kW)	6	8	10	12	15
Max. apparent output power (kVA)	6.6	8.8	11.1	13.2	16.5
Rated output voltage (V)			220 / 380; 230 / 400		
Rated output frequency (Hz)			50/60		
Rated output current (A)	8.7	11.5	14.4	17.3	21.7
Max. AC output current (A)	9.5	12.7	15.9	19.1	23.8
Peak output power			≥110%, 10mins； ≥120%, 1.25min； ≥150%, 20ms		
Back-up switch time (ms)			<10		
THDu			<2%		
Protection					
Supported protection	PV reverse polarity protection, Anti-islanding protection, Ground fault protection, Battery reverse protection, Leakage current protection, Insulation resistance detection, Backup output short circuit protection, AC under-voltage protection, AC output over-current protection, AC over-voltage protection				
Over voltage category	DC Type III / AC Type III				
Certifications and standards					
Certificates	IEC 61000-6-1/-2/-3/-4, IEC 61000-3-11, IEC61000-3-12; EN 62109-1, EN 62109-2; EN50549-1; EN50549-10; EN50438; G98/G99:2022; VDE-AR-N 4105:2018; CEI 0-21:2022; C10/11; Rfg:2016/NC Rfg:2018/PTPiREE:2021; NRS 097-2-1:2017; Hungary; NTS V2.1:2021-07&UNE217002:2020&UNE217001:2020; NA/EEA-NE7 – CH 2020; OVE Directive R 25:2020, TOR Erzeuger Type A V1.2; TR3.3.1:2019;ANRE228; ANRE228; NA/EEA-NE7; PPDS:2022 for A1&A2; RS 097-2-1 :2017; OVE Directive R 25:2020, TOR Erzeuger Type A V1.2; EIFS 2018:2				
General data					
Ingress protection	IP65				
Operating temperature range (℃)	(-25~+60)				
Cooling	Natural cooling				
Relative humidity (m)	0-95%				
Operating altitude (m)	4000 (>2000m power derating)				
Dimensions W*D*H (mm)	566 x 593.5 x 219.5				
Weight (kg)	32				
Topology (solar / battery)	Transformerless / Transformerless				
Noise emission (dB)	<45				
Display and communication					
Display	LCD				
Communication	RS485,CAN,WiFi				



KEY STRENGTHS

- 100% three-phase unbalanced output.
- Max. charging /discharging current of 240A.
- Support storing energy from diesel generator.
- Ac coupling to retrofit Existing solar system.
- Max. 10 pcs parallel for on-grid And off-grid operation; Support multiple batteries parallel.
- 6 time periods for battery charging/discharging .
- 48V low voltage battery, transformer isolation design.

SPECIFICATIONS

Models	XD30KTR	XD40KTR	XD50KTR	XD60KTR
Input（PV)				
Max. Input Power	45000Wp	60000Wp	75000Wp	90000Wp
Max. Input Voltage	1100V			
Start-up Voltage	200V			
Rated Voltage	620V			
MPPT Voltage Range	180V-1000V			
Number of MPP Trackers	4			
Number of String per MPPT	8			
Max. Current per MPPT	4*40A			
Max. Short Circuit Current per MPPT	4*60A			
Output (On-Grid)				
Rated Output Power	30kW	40 kW	50 kW	60 kW
Max. Output Power	33kVA	44 kVA	55 kVA	66 kVA
Max. Output Current	50A	66.7 A	83.4 A	100 A
Max. Input Power from Grid	45kW	60 kW	75 kW	90 kW
Max. Input Current from Grid	68.4A	91 A	113.7A	136.4A
Rated Grid Voltage	3 / N / PE, 230 V / 400 Vac			
Rated Grid Frequency	50Hz / 60Hz			
THDi(@Rated Power)	<3%			
Power Factor	0.8 leading ~ 0.8 lagging			
Battery				
Battery Type	Lithium			
Battery Voltage Range	160V - 850V			
Max. Charge / Discharge Power	44kW		55kW	66kW
Max. Charge / Discharge Current	2*100A			
Communication	CAN / RS485			
Output (EPS)				
Rated Output Power	30kW	40kW	50kW	60kW
Max. Output Power	1.5 times / 10s			
Max. Output Current	45.6A	60.7 A	75.8 A	91 A
Switch Time	<10ms			
Rated Voltage	3 / N / PE, 230V / 400Vac			
Rated Frequency	50Hz / 60Hz			
Max. AC passthrough current	150A			
THDv (@linear load)	<2%			
Output (Generator)				
Max. Output Power	30kW	40kW	50kW	60kW
Max. Output Current	45.6A	60.7 A	75.8 A	91 A
Rated Voltage	3 / N / PE, 230V / 400Vac			
Rated Frequency	50Hz / 60Hz			
Efficiency				
Max. Efficiency	98.40%			
European Efficiency	97.50%			
Battery Charge / Discharge Efficiency	97.50%			
Protection				
Protection	DC Switch, DC Reverse Polarity Protection, Anti-islanding Protection, AC Short Circuit Protection, Residual Current Monitoring, Ground Fault Monitoring, Over Current /Voltage Protection, Battery Active Function, I-V Curve Scan			
Surge Protection	Type II			
AFCI Protection	Optional			
General Data				
Display	LCD / LED			
Dimension（W x H x D）	620 x 900 x 300 mm			
Operating Temperature Range	(-30 ~ +60℃)			
Cooling Method	Smart Cooling			
Protection Degree	IP66			
Max, Operating Altitude	4000m			
Relative Humidity	0~95%			
Self-consumption	<15W			
Topology	Transformerless			