

Technical Specifications

American ESS split- phase inverter



The Low-Voltage North American hybrid inverter series is specifically designed for home energy storage, operating at 48V with a split-phase configuration

Input (PV)	R12KLNA-P4	R16KLNA-P4
Max.DC Input Power(kW)	18	24
No.of MPPT Trackers	4	
MPPT Voltage Range (without battery) (V)	120~500	
MPPT Voltage Range (with battery) (V)	120~430	
MAX.DC Input Voltage(V)	500	
MAX.Input Current per MPPT(A)	16	20/26
MAX.Short Current per MPPT(A)	22	22/34

Battery Input	R12KLNA-P4	R16KLNA-P4
Nominal voltage(V)	48	
MAX.Charging/Discharging Current(A)	250/260	
Battery Voltage Range(V)	40-58	
Battery Type	Lithium/Lead Acid	
Charging Controller	3-Stage with Equalization	

AC Output (On-Grid)	R12KLNA-P4	R16KLNA-P4
Nominal output power Output to Grid(kVA)	12	16
MAX. Apparent Power Output to Grid(kVA)	13.2	17.6
Nominal AC Voltage (L-N/L1-L2)	110~120) / (220~240V) split phase, 240V single phase	
Nominal AC Frequency (Hz)	60Hz (55 to 65Hz)	
Nominal AC Current (A)	50	66.7
Max. AC Current (A)	55	73.3
Max. Grid Passthrough Current(A)	200	
Output THDI	<3%	

Efficiency	R12KLNA-P4	R16KLNA-P4
Mppt efficiency	99.9%	
Europe Efficiency(PV)	96.2%	
Max.PV to Grid Efficiency(PV)	96.5%	
Max.Battery to Load Efficiency	94.6%	
Max.PV to Battery charging Efficiency	95.8%	
Max.GRID to Battery charging Efficiency	94.5%	

Protection	R12KLNA-P4	R16KLNA-P4
Grounding detection	YES	
Arc Fault Protection	YES	
Island Protection	YES	
Insulation Resistor Detection	YES	
Residual Current Monitoring Unit	YES	
Output Over Current Protection	YES	
Back-up Output Short Protection	YES	
Output Over Voltage Protection	YES	
Output Under Voltage Protection	YES	

General	R12KLNA-P4	R16KLNA-P4
Operating Temperature Range	-25 ~ +60°C	
Relative Humidity	0-95%	
Operating Altitude	0~4000m(Derating above 2000m altitude)	
Ingress Protection	IP65/NEMA 3R	
Weight (kg)	53	
Weight (with breaker) (kg)	56	
Dimensions (Width*Height*Depth)(mm)	495x900x260	
Cooling	FAN Cooling	
Noise emission (dB)	38	
Display	Touch panel	
Communication With BMS/Meter/EMS	RS485, CAN	
Supported communication interface	RS485, 4G (optional), Wi-Fi	
Self-consumption (W)	< 25	
Safety	UL1741,UL1741SA&SB all options, UL1699B, CSA -C22.2 NO.107.1-01,RSD(NEC690.5,11,12)	
EMC	FCC Part 15 Class B	
Grid connection standards	IEEE 1547, IEEE 2030.5, HECO Rule 14H, CA Rule 21 Phase I,II,III,CEC,CSIP,SRD2.0,SGIP,OGPe,NOM,California Prob65	

Other	R12KLNA-P4	R16KLNA-P4
BACKUP Conduit	3"	
GRID Conduit	3"	
AC SOLAR Conduit	2"	
PV Input Conduit	2"	
BAT Input Conduit	2"	
PV Switch	Integrated	

