Liwal Hybrid Inverter IP 21 Series

Pure sine wave

WiFi

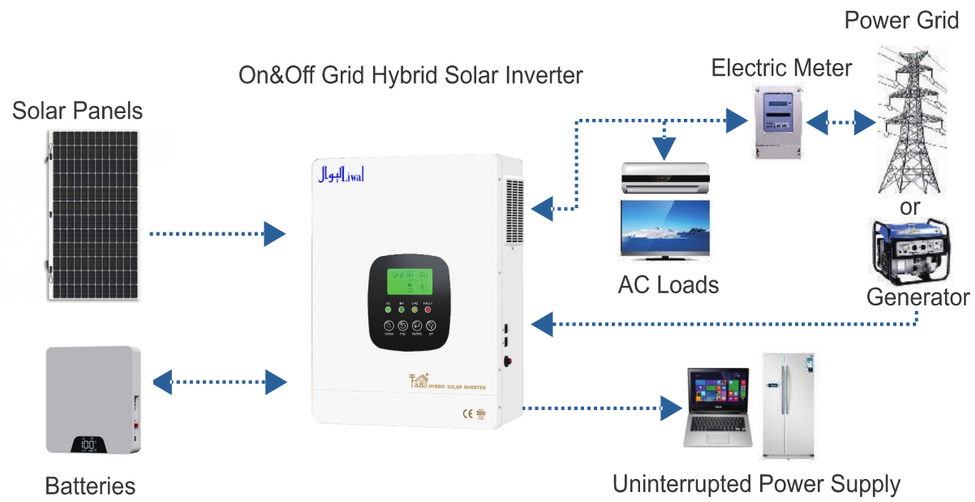
Two-way energy storage design

Configurable working mode

Battery Less Operation

RS485

- High Frequency inverter with high power density
- Two way battery charging from both grid and solar panel
- Wide MPPT voltage range
- Different working mode such as grid connected, off grid and hybrid mode.
- Grid connected current setting, output priority setting, charging priority setting
- Can communicate with lithium battery BMS
- Battery less operation mode.



Technical Parameters

	LH43K21	LH63K21	LH83K21	LH103K21	LH123K21
PV Input					
Max PV Input Power	5000W	7000W	4500W*2	6000W*2	6000W*2
MPPT Tracking Voltage Range	40Vdc-450Vdc	80Vdc~450Vdc			
Rated Voltage	360Vdc				
Max PV Input Voltage voc (at the lowest temperature)	500Vdc				
Max PV Input Current	18A	27A	18A*2	22A*2	27A*2
MPPT Tracking Channels(Input Routed)	1 Routed		2 Routed		
Battery & Charging					
Battery Type	Lead-acid Battery/Lithium Battery				
	Custom Battery (Charging and discharging paramcters of different types of batteriescan be set through the operation board)				
Rated Battery Voltage	24Vdc	48Vdc			
Battery voltage Range	21~30Vdc (default)	42~60Vdc (default)			
Max PV Charging Current	150A	120A	150A	180A	200A
Max AC Charging Current	100A	80A	100A	120A	140A
Max Charging Current	150A	120A	150A	180A	200A
Grid-Connected Operation (Grid-Connected Output (AC))					
Rated Output Power	4300W	6300W	8300W	10.3KW	12.3KW
Rated Output Voltage	220Vac / 230Vac / 240Vac				
Grid Voltage Range	187Vac ~ 264Vac				
Rated Output Frequency	50Hz / 60Hz				
Frequency Range	47Hz~52Hz(50Hz),57Hz~62Hz(60Hz)				
Rated Output Current	19.5A/18.7A/17.9A	28.6A/27.4A/26.2A	37.7A/36.1A/34.6A	46.7A/44.9A/42.9A	55.9A/53.5A/51.3A
Power Factor	> 0.98(Rated Power)				
Off-Grid Operation (AC Input)					
Rated Input voltage	220V / 230V / 240V				
Mains input voltage range	165Vac~280Vac / 120Vac~280Vac (Can be set)				
Rated Input Frequency	50Hz / 60Hz				
Input Frequency Range	45Hz~55Hz(50Hz),55Hz~65Hz(60Hz)				
AC Output					
Rated Output Power	4300W	6300W	8300W	10.3KW	12.3KW
Rated Output Voltage	220V / 230V / 240V				
Output Voltage Accuracy	±2%				
Rated Input Frequency	50Hz / 60Hz				
Output Frequency Accuracy	±1%				
Output Wave	Pure Sine Wave				
Mixed Operation (Complementary Mode (AC Input))					
Rated Input voltage	220V / 230V / 240V				
Mains input voltage range	187Vac~264Vac				
Rated Input Frequency	50Hz / 60Hz				
Input Frequency Range	47Hz~52Hz(50Hz),57Hz-62Hz(60Hz)				
AC Output					
Rated Output Power	4300W	6300W	8300W	10.3KW	12.3KW
Rated Voltage Rated	220Vac / 230Vac / 240Vac				
Output Current	19.5A/18.7A/17.9A	28.6A/27.4A/26.2A	37.7A/36.1A/34.6A	46.7A/44.9A/42.9A	55.9A/53.5A/51.3A
General parameters					
Maximum Conversion Efficiency(Battery Discharge)	94%(peak value)				
MPPT Tracking Efficiency	≥99.9				
Transfer Time	10ms(Typical value)				
Display	LCD+LED				
Cooling Method	Cooling fan in intelligent control				
Communication	RS485/Mobile APP(WIFI Monitoring or GPRS monitoring)(Optional)				
Protection Degree	IP20				
Installation	Wall-Mounted				
Protect					
Battery low voltage alarm	22Vdc (default value)	44Vdc (default value)			
Battery low voltage protection	21Vdc (default value)	42Vdc (default value)			
Anti-islanding protection	≤2S				
Overload power protection	Automatic Protection (battery mode),Circuit Breaker or Insurance (AC mode)				
Output short circuit protection	Automatic Protection (battery mode),Circuit Breaker or Insurance (AC mode)				
Temperature protection	>90°C (turn off inverter and charging)				
Environment					
Operating temperature	-10C~50°C				
Storage temperature	-15C~60°C				
Nois	≤55dB				
Elevation	2000m (More than derating)				
Humidity	0%~95% ,No condensation				
Dimensions And Weight					
Product Size(L*W*Hmm)	365*297*102	390*320*112	515*365*117	535*462*117	630*540*130
Package Size(L*W*Hmm)	440*352*167	465*375*187	600*430*192	615*527*192	715*605*205
N.W.(kg)	7	8.5	13	15.5	23.5
G.W.(kg)	7.5	9.5	15	17.5	25.5

Note: 1. Specifications are subject to change without prior notice; 2. Special voltage and power requirements can be customized according to the actual situation of users.

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