LPESS | Beyond Sunlight. Proven Power

LPR-F5K/6.5K/10K/16K-NAS-48PR

5kW/6.5kW/10kW/16kW

- **The LPR-F5K-NAS-48PR** is a 5kW US-standard split-phase off-grid inverter for cabins, small homes, farm sheds, and basic solar backup systems. It supports 48V batteries, dual MPPT solar input, pure sine wave output, and parallel expansion. Its compact size and 120A hybrid charging capacity make it ideal for entry-level off-grid power.
  The LPR-F6.5K-NAS-48PR is a 6.5kW 48V split-phase off-grid inverter for homes, small farms, telecom sites, and stronger residential backup loads. It supports 120/240V output, dual MPPT solar charging, and parallel expansion. With 140A hybrid charging and up to 10kW PV input, it captures more solar energy for daily backup needs.
  The LPR-F10K-NAS-48PR is a 10kW US-standard split-phase off-grid inverter for larger homes, workshops, ranches, and whole-home backup systems. It supports 48V batteries, dual MPPT solar input, pure sine wave output, and scalable parallel operation. Its 200A hybrid charging and 63A bypass capacity help support heavier daily loads.
  The LPR-F16K-NAS-48PR is a high-power 16kW 48V split-phase off-grid inverter for demanding residential, agricultural, and light commercial backup systems. It supports generator or grid backup input, dual MPPT solar input, and up to 6 units in parallel. With 300A charging and 24kW PV input capacity, it is built for large off-grid energy systems.

Recommended Applications

LPR-F5K-NAS-48PR

Cabins/Small Homes/RV Backup/Farm Sheds/Basic Off-Grid Solar Systems

LPR-F6.5K-NAS-48PR

Homes/Small Farms/Telecom Sites/Cabins/Stronger Residential Backup Loads

LPR-F10K-NAS-48PR

Large Homes/Workshops/Ranches/Farms/Whole-Home Backup Power Systems

LPR-F16K-NAS-48PR

Large Residences/Farms/Light Commercial Sites/Island/ High-Load Off-Grid Systems

Features

120/240V Split Phase

Delivers US-standard split-phase output for homes and sites using both 120V and 240V loads, including appliances, pumps, tools, lighting, and backup circuits.

48V Battery System

Works with 48V low-voltage battery banks, supporting lithium-ion, lead-acid, and user-defined battery settings for flexible solar storage configuration.

Parallel Expansion

Supports up to 6 units in parallel, allowing users to increase system capacity as backup loads or off-grid power demand grows.

Dual MPPT Solar

Dual MPPT inputs improve solar energy harvesting from separate PV strings, helping the system charge more efficiently under changing sunlight conditions.

Generator Ready

Supports generator or grid input as backup power, helping maintain load operation and battery charging during low solar production or extended outages.

Smart Monitoring

Optional WiFi or GPRS monitoring lets users check inverter status, energy data, alerts, and system performance through a mobile app.

LPR-F5K/6.5K/10K/16K-NAS-48PR

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Parameter	LPR-F5K-NAS-48PR	LPR-F6.5K-NAS-48PR	LPR-F10K-NAS-48PR	LPR-F16K-NAS-48PR
INVERTER OUTPUT				
Rated Output Power	5000W	6500W	10,000W	16,000W
Max. Peak Power	10,000VA	13,000VA	20,000W	2 times rated power, 10s
Rated Output Voltage	120/240Vac (single-phase/split-phase)		120Vac single-phase / 240Vac split-phase / three-phase, paralleled	120Vac/240Vac (L1+L2+N+PE)
Load Motor Capacity			6HP	9HP
Rated AC Frequency	50/60Hz			
Waveform	Pure sine wave			
Switch Time	10ms (typical)			
Parallel Capacity	1-6 units			
Output Mode	Off-grid		Off-grid (default) / Hybrid	Off-grid
BATTERY				
Battery Type	Li-ion / Lead-acid / User-defined			
Rated Battery Voltage	48Vdc			
Battery Voltage Range	40-60Vdc			
Max. Mains / Generator Charging Current	60A	80A	120A	300A
Max. Hybrid Charging Current	120A	140A	200A	300A
PV INPUT				
No. of MPPT Trackers	2			
Max. PV Array / Input Power	3800W + 3800W	5000W + 5000W	5500W + 5500W	12000W + 12000W
Max. PV Input Current	18A + 18A		22A + 22A	36A + 36A
Max. PV Open-circuit Voltage	550Vdc + 550Vdc		500Vdc + 500Vdc	600Vdc / 600Vdc
MPPT Voltage Range	150-450Vdc		125-425Vdc	120-550Vdc / 120-550Vdc
UTILITY / GENERATOR INPUT				
Rated Input Voltage	120/240Vac split phase			120/240Vac (L1+L2+N+PE)
Input Voltage Range	65-140Vac		90-140Vac	85-140Vac / 170-280Vac
Rated Input Frequency	50/60Hz			
Bypass Overload Current	40A		63A	Grid: 100A; Generator: 66.7A
EFFICIENCY				
MPPT Tracking Efficiency	99.9%			>99%
Max. Battery / Inverter Efficiency	93%		92%	94.3%
GENERAL DATA				
Dimensions (W x H x D)	584.6 x 410 x 133 mm		620 x 445 x 130 mm	20.24 x 33.39 x 8.46 in
Weight	18.9kg		27kg	47.5kg (approx. 105 lbs)
Protection Degree	IP20, indoor only			
Operating Temperature Range	-10°C to 55°C, >45°C derating			14°F to 131°F, >113°F derated
Noise	<60dB			
Cooling Method	Intelligent fan			Intelligent air cooling
Warranty	24 months			2 years
COMMUNICATION				
Embedded / Communication Interfaces	RS485 / CAN / USB / Dry Contact			
External Modules (Optional)	Wi-Fi / GPRS			Wi-Fi / 4G Stick
CERTIFICATION				
Safety	IEC62109-1, IEC62109-2, UL1741			
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B			

- Specifications are subject to change without prior notice.
- Product images are for reference only. Actual product appearance may vary depending on configuration.
- Battery compatibility should be confirmed according to BMS protocol and system configuration.
- PV string design must follow the maximum PV open-circuit voltage, MPPT voltage range and maximum PV input current limits.
- Parallel system design should use matching inverter models, shared battery bank and proper AC/DC protection devices.

+(0512) 6722 5037 E:info@Levin-Power.com