LPESS | Beyond Sunlight. Proven Power

LPR-H15K/18K/20K/24K-EU3-48PS

15kW/18kW/20kW/24kW

- The LPR-H15K-EU3-48PS is a 15kW three-phase low-voltage hybrid inverter for European residential and small commercial solar storage systems. It supports 48V batteries, 380/400V three-phase output, 2 MPPTs, IP66 outdoor installation, parallel expansion, AC coupling and high battery charge/discharge capability.

The LPR-H18K-EU3-48PS is an 18kW three-phase 48V hybrid inverter for larger homes, villas and light commercial backup systems. It supports 36kW PV array capacity, 2 MPPT solar input, IP66 protection, parallel operation and strong 375A battery charge/discharge current.

The LPR-H20K-EU3-48PS is a 20kW three-phase low-voltage hybrid inverter for high-load residential and small business solar storage projects. It supports 40kW PV input, 390A charge/discharge current, 380/400V output, IP66 outdoor use and scalable system expansion.

The LPR-H24K-EU3-48PS is a 24kW three-phase 48V hybrid inverter for larger European solar storage applications. It supports 48kW PV array capacity, 415A max charge/discharge current, IP66 outdoor installation, parallel expansion and 2x surge capacity for demanding loads.

Recommended Applications

LPR-H15K-EU3-48PS
For European Homes/Villas /Small Shops Needing Three-Phase Solar Storage/Reliable Backup Power

LPR-H18K-EU3-48PS
For Larger Homes/Small Commercial Sites With Higher Daytime Loads / Stronger Battery Charging Needs

LPR-H20K-EU3-48PS
For Workshops/Farms/High-Load Residential Projects Requiring Larger PV Input/Three-Phase Backup

LPR-H24K-EU3-48PS
For Large Villas/Small Factories/Commercial Buildings Needing Maximum Low-Voltage Storage Power In This Series

Features

IP66 Outdoor
IP66 protection supports outdoor installation, helping protect the inverter from rain, dust and exposed operating conditions in residential and small commercial sites.

2x Surge Output
Provides up to 200% overload for 10 seconds, helping start demanding appliances, pumps and motor loads without oversizing the whole system.

Three-Phase Hybrid
Supports 380/400V three-phase solar storage, battery backup and grid-connected operation, making it suitable for European residential and light commercial systems.

Parallel Expansion
Supports up to 8 units in parallel and AC coupling, making it easier to expand storage systems or retrofit existing PV installations.

High Battery Current
Supports up to 415A charge and discharge current in the 24kW model, helping batteries recover faster and support heavier backup loads.

Hot Climate Ready
Full-load operation up to 45°C helps maintain stable output in hotter installation environments, reducing performance concerns for outdoor and utility-area installations.

LPR-H15K/18K/20K/24K-EU3-48PS

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Parameter	LPR-H15K-EU3-48PS	LPR-H18K-EU3-48PS	LPR-H20K-EU3-48PS	LPR-H24K-EU3-48PS
INVERTER INPUT / OUTPUT (GRID)				
Rated Power (kW)	15 kW / 15 kW	18 kW / 18 kW	20 kW / 20 kW	24 kW / 24 kW
Rated Voltage (V a.c.)	380 / 400 V a.c., 3W+N+PE			
Rated Frequency (Hz)	50 / 60 Hz			
Power Factor Range	0.8 leading ~ 0.8 lagging			
Switch Time (ms)	<20 ms			
Current (Maximum / Continuous) (A a.c.)	43 A / 22 A	52 A / 26 A	58 A / 29 A	60 A / 35 A
Max. Output Overcurrent Protection	400 V a.c. / 100 A a.c.			
BATTERY				
Battery Type	Lithium / Lead-acid			
Battery Voltage Range (V d.c.)	40 ~ 60 V d.c.			
Rated Battery Voltage (V d.c.)	51.2 V d.c.			
Max. Charge Current (A d.c.)	315 A	375 A	390 A	415 A
Max. Discharge Current (A d.c.)	315 A	375 A	390 A	415 A
PV INPUT				
No. of MPPT Tracker / Strings	2 / 2+2			
Max. PV Array Power (kW)	30 kW	36 kW	40 kW	48 kW
Max. DC Voltage (V d.c.)	1000 V d.c.			
MPPT Voltage Range (V d.c.)	150 ~ 850 V d.c.			
Start-up Voltage (V d.c.)	180 V d.c.			
Max. Input Current (A d.c.)	4*20 A			
Isc PV (Absolute Maximum) (A d.c.)	4*30 A			
AC OUTPUT (EPS)				
EPS Rated Output Voltage (V a.c.)	380 / 400 V a.c., 3W+N+PE			
EPS Rated Output Frequency (Hz)	50 / 60 Hz			
EPS Rated Output Active Power (kW)	15 kW	18 kW	20 kW	24 kW
EPS Rated Output Apparent Power (kVA)	15 kVA	18 kVA	20 kVA	24 kVA
EPS Rated Output Current (A a.c.)	22 A	26 A	29 A	35 A
Overload Capacity (Off Grid)	110% 600s / 120% 300s / 150% 60s / 200% 10s			
EFFICIENCY				
MPPT Efficiency	99.90%			
Euro-efficiency	97.20%			
Max. Efficiency	98.00%			
PROTECTION & FEATURE				
Insulation Monitoring	Yes			
Residual Current Monitoring	Yes			
Parallel Function	Yes			
Protection Degree	IP66			
Certifications	IEC 62109-1/2, IEC 62477-1, IEC 61000-6-1, IEC 61000-6-3, EN 50549-1&-10, NRS 097-2-1, IEC 61727, IEC 61683, IEC 62116			
Other Protection	Output over voltage, output over current, short circuit, surge, temperature, anti-islanding			
GENERAL PARAMETER				
Storage Temperature	-25 °C ~ +60 °C			
Operating Temperature	-25 °C ~ +60 °C (linearly derating to 60% when exceeding +45 °C ~ +60 °C)			
Humidity	0 ~ 100% (Non-condensing)			
Altitude (m)	4000 m (>2000 m derating)			
Noise (dB)	<65 dB			
Warranty (year)	5 years			
Machine Dimension (W*H*D) (mm)	448*660*265 mm			
Machine Weight / N.W. (kg)	45 kg			
DISPLAY & COMMUNICATION				
Display	LCD + APP			
Interface	RS485 / WiFi / CAN / DRM (Optional: Bluetooth / LAN / Meter)			
Note	Some specifications vary by power rating and are shown in the applicable model column.			

- 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.

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