

Deye SUN-6K-SG05LP3-EU

Product code: F.deye.3f.H.6k-SG05LP3-EU



Deye SUN-6K-SG05LP3-EU – Three-Phase Hybrid Inverter 6 kW for On-Grid and Off-Grid Systems

The Deye SUN-6K-SG05LP3-EU is a modern premium-class three-phase hybrid inverter with a power output of 6 kW, designed for advanced photovoltaic installations. The device supports both on-grid and off-grid systems, enabling intelligent energy management from PV installations, the public grid, batteries, and generators. Thanks to its flexible operating modes, high compatibility with 48V batteries, and advanced monitoring features, the Deye SUN-6K-SG05LP3-EU is a reliable energy management hub for homes or small businesses.

Product variants

Index	Price
<div>Deye SUN-6K-SG05LP3-EU</div> <div>F.deye.3f.H.6k-SG05LP3-EU</div>	<div>Product prices only visible after login. If you do not have an account, please register.</div>

Product description

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Main advantages of the Deye SUN-6K-SG05LP3-EU inverter:

Hybrid energy management – simultaneous support for PV, energy storage, grid, and generators.

Full phase flexibility – 100% unbalanced three-phase output, with each phase operating independently, supporting up to 50% of rated power.

Energy independence – off-grid operation with the possibility to connect up to 10 inverters in parallel to increase power.

Maximum charging/discharging performance – current up to 240 A and power twice the rated power for 10 seconds in island mode.

Safety and compliance – full protection package, compliance with European standards (CE, VDE, G99, EN 50549).

Smart control – 6 time intervals for battery charging and discharging, monitoring via Wi-Fi, Bluetooth, GPRS, LAN, or 4G.

Compatibility with 48V batteries – supports multiple models of lithium-ion and lead-acid batteries.

Technical specifications:

General data:

Model: SUN-6K-SG05LP3-EU

Rated power: 6,000 W

Topology: transformerless

Cooling system: intelligent air cooling

Protection rating: IP65 (suitable for indoor and outdoor use)

Dimensions: 386 × 660 × 253 mm

Weight: 35.2 kg

Noise level: ≤55 dB

Operating temperature range: -40°C to +60°C (derating above 45°C)

Humidity: 0–100%

Maximum installation altitude: 3000 m above sea level

Warranty: 5/10 years depending on installation location

PV side:

Max. PV input power: 8,000 W

Max. PV voltage: 550 V

Start voltage: 160 V

MPPT voltage range: 200–650 V

Number of MPPT trackers: 2

Number of PV inputs: 2

Max. PV current: 13.4 A per tracker

Battery side:

Battery type: lithium-ion or AGM/GEL (lead-acid)

Battery voltage range: 40–60 V

Max. charging and discharging current: 240 A

Number of battery inputs: 1

BMS cooperation mode: automatic adaptation

AC side:

Rated voltage: 220/380V, 230/400V (3L+N+PE)

Frequency: 50/60 Hz

Apparent power: 6,600 VA

Rated AC current: 9.1 A

Max. AC current: 13.6 A

Parallel operation function: up to 10 devices

Safety features and standards:

Protections: surge protection (Type II DC/AC), short circuit, overcurrent, overtemperature, reverse polarity, DC insulation, RCD

Standards: IEC 61727, IEC 62116, EN 50549, CEI 0-21, VDE-AR-N 4105, G99, NRS 097

EMC and safety: IEC/EN 62109-1/-2, IEC/EN 61000-6-1/2/3/4

Interfaces and monitoring:

Communication interfaces: RS485, RS232, CAN

Monitoring modes: Wi-Fi, Bluetooth, LAN, GPRS, 4G (optional)

Additional features: timed charging/discharging management, remote access

Choose reliability and independence with Deye

The Deye SUN-6K-SG05LP3-EU is the ideal solution for users seeking maximum flexibility and control over their PV system and energy storage. Choose technology that adapts to your needs—from grid operation to full energy autonomy.