

Deye SUN-18K-SG05LP3-EU

Product code: F.deye.3f.H.18k-SG05LP3-EU



Deye SUN-18K-SG05LP3-EU – High-Performance 18 kW Hybrid Inverter for Large PV Installations

The Deye SUN-18K-SG05LP3-EU is a three-phase hybrid inverter with 18 kW of output power, designed for large-scale photovoltaic installations in both residential and commercial sectors. This device enables efficient energy management in both on-grid and off-grid modes, while supporting high-voltage battery storage systems and diesel generators. With the ability to operate in parallel with up to 10 units, the 18K model offers flexibility and scalability for even the most demanding users.

Product variants

Index	Price
Deye SUN-18K-SG05LP3-EU F.deye.3f.H.18k-SG05LP3-EU	Product prices only visible after login. If you do not have an account, please register.

Product description

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Key Benefits of the Deye SUN-18K-SG05LP3-EU

High charging and discharging efficiency

Thanks to a maximum charging/discharging current of 50 A, the inverter allows for fast and efficient energy storage and retrieval. This results in improved solar energy utilization and enhanced energy independence.

Diesel generator compatibility

The SUN-18K model supports power input from diesel generators, enabling energy storage from this source as well. This is an ideal solution for systems requiring reliable emergency backup power.

Parallel operation – up to 10 units

The inverter allows for parallel connection of up to 10 devices in both on-grid and off-grid systems. This level of scalability makes it perfect for expanding existing installations or building large PV systems from scratch.

High-voltage battery support – wide compatibility

The device supports lithium-ion batteries with a voltage range of 160 to 700 V, ensuring flexibility across a variety of battery technologies and improved overall system performance.

Retrofit compatibility

With AC coupling capability, the inverter can be easily integrated into existing PV systems. This allows for a smooth upgrade from a traditional setup to a hybrid energy system without the need to replace the entire infrastructure.

Advanced battery cycle management

Deye enables configuration of up to 6 independent time periods for battery operation. This helps to optimize charging and discharging according to energy tariffs or time of day, maximizing savings and efficiency.

Technical Specifications – Deye SUN-18K-SG05LP3-EU

Rated power: 18,000 W

Maximum PV input power: 26,000 W

MPPT: 2 trackers (2+2 strings)

Max efficiency / EU efficiency: 97.6% / 97.0%

PV input voltage range: 150–850 V

Supported batteries: Li-ion, 160–700 V

Charging/discharging current: up to 50 A

Communication: RS485, CAN, WiFi, LAN, 4G, Bluetooth (optional)

Protection rating: IP65

Weight: 30.5 kg

Dimensions: 408 × 638 × 237 mm

Operating temperature: -40°C to +60°C

Cooling: Intelligent air cooling

The Deye SUN-18K-SG05LP3-EU is built for large photovoltaic systems where performance, safety, and flexibility are key. Its advanced technical features support the creation of a scalable, future-proof energy management system—ideal for both residential and commercial applications.