

DATA SHEET

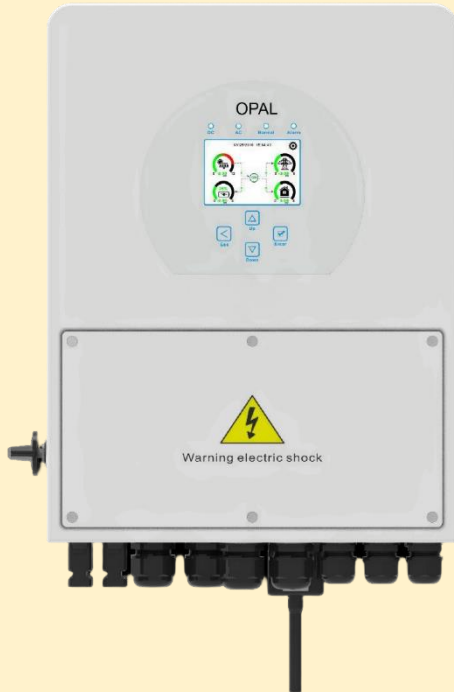
SINGLE PHASE HYBRID INVERTER



This Energy Storage System comprises of either a 3.6kW/ 5kW hybrid single phase hybrid inverter with a 4.8kWh battery pack or 2 battery packs expandable to even higher capacity if required. Outdoor enclosure will be provided

OPAL-3.6K-1P- EU & OPAL-5K-1P-EU

FEATURES OF HYBRID INVERTER



- LCD** Colourful touch LCD, IP65 protection degree
- 4** 4ms fast transfer from on-grid to off-grid mode, ensuing no disruption to any loads
- 6** 6 time period setting for battery charging/discharging
- 16** The hybrid inverters can be expanded up to 16 inverters
- 120** Able to take high DC charge & discharge current
- Frequency droop control for off grid micro-grid application
- Able to support storing energy from diesel generator
- Suitable for both DC or AC couple to retrofit existing solar system
- Unique Smart Load application and Grid peak shaving function
- Easy access to system via either PC or phone App



Opal residential monitoring solution take great care to ensure that your PV system is in excellent operation throughout its entire life-cycle. This monitoring solution offer you details information of your power generating plant including daily, monthly, yearly energy and total energy etc, through wireless communication with your router to the internet by a smart WIFI plug. User can easily access to the monitoring page via PC web or phone APP. The cloud data will be kept in Europe and Singapore



Technical Specification

Hybrid Inverter

| Model | OPAL-3.6K-1P-EU | OPAL-5K-1P-EU |
|---|---|--------------------|
| PV Input DC Rating | | |
| No of MPPT for solar input | Two | |
| Max DC input Power | 4,680Wp | 6,500Wp |
| PV DC input MPPT voltage range | 150-425V | |
| Start-up DC Voltage | 125V | |
| PV Input Current per MPPT | 13A +13A | |
| Battery Voltage range | 40V to 60V | |
| DC Max. Charging/ Discharging | 90A | 120A |
| AC Rating | | |
| Rated AC Output and UPS power | 3,600W | 5,000W |
| Max. Output AC Output power | 3,690W | 5,500W |
| Off-Grid Peak AC Power | 7,200W for 10 sec | 10,000W for 10 sec |
| AC Output rated Current | 16.4A | 22.7A |
| Max. AC Current | 18.0A | 25.0A |
| Max. Continuous AC pass-through | 35.0A | |
| Output Voltage frequency | 230V single phase 50/60Hz | |
| Current harmonic Distortion | THD<3% (Linear Load <1.5%) | |
| Power Factor | 0.8 leading to 0.8 lagging | |
| Efficiency | | |
| Max Efficiency | 97.6% | |
| Euro Efficiency | 97.0% | |
| MPPT Efficiency | 99.9% | |
| Protections | | |
| PV input lightning Protection | Integrated | |
| Anti-Islanding protection | Integrated | |
| PV String Input Reverse Polarity Protection | Integrated | |
| Insulation Resistor Detection | Integrated | |
| Residual Current monitoring Unit | Integrated | |
| Output Over Current Protection | Integrated | |
| Output Short Circuit Protection | Integrated | |
| Output Over Voltage Protection | Integrated | |
| Surge Protection | DC Type II/ AC Type II | |
| UPS Transfer Time | 4mSec | |
| Certifications and Standards | | |
| Grid Regulation | IEC61727, IEC62116 | |
| Safety standard/ EMC | IEC62109-1/-2, IEC61000-6-1/2/3/4 | |
| General | | |
| Operating Temperature Range °C | -25 to 60°C, 45°C derating | |
| Cooling | NATURAL COOLING | |
| Elevation | <3000 M | |
| Noise (DB) | <30 DB | |
| Humidity | 5% to 95% (Non-Condensing) | |
| Communication with BMS | RS485/ CAN | |
| Protection Degree | IP65 | |
| Inverter Weight (Kg) | 11.4 Kg | 14Kg |
| Inverter Dimension (mm) | 330W x 433H x 238D mm (Wall mounted) | |
| Warranty | 5 years (Standard) + 5 years (Optional) | |