PULSE S4

AlpSolarr
A LIGOO BRAND

# PULSE S4

**ECO-hybrid Inverter**

## Features >>

- IP66 protection rating.
- Supports up to 18kW dual-channel photovoltaic power input.
- Dual AC outputs with intelligent load management.
- Supports battery-free operation mode.
- Supports parallel connection of up to 6 single-phase inverters or 9 three-phase inverters in a grid configuration.
- Lithium batteries can be activated by AC/PV/diesel generators.
- Wide grid voltage adaptation range of 90-280Vac.
- Minimum MPPT operating voltage of 60Vdc.
- Compatible with diesel generator interface, automatic start/stop control.
- Features grid connection capability for peak shaving and valley filling(TOU).
- Built-in Wi-Fi and Bluetooth, supporting mobile device monitoring (Android/iOS systems).
- Supports RGB indicator light status display, with different colors corresponding to different operating modes.
- 5-year warranty / 10-year service (optional).

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## **PULSE S4** Product Specifications

| Model | S4 Lite(6kW) | S4(8kW) | S4 Pro(10kW) | S4 Ultra(12kW) |
|---|---|---|---|---|
| **Battery Data** | | | | |
| Battery Type | Lithium-ion & Lead-acid | | | |
| Rated Battery Voltage (Vdc) | 48 | | | |
| Battery Voltage Range (Vdc) | 40~60 | | | |
| Max. Charge/Discharge Current (A) | 125 / 125 | 165 / 165 | 165 / 165 | 240 / 240 |
| Forced Wake-up by PV | YES | | | |
| **PV Input** | | | | |
| Max. MPPT Input Power (W) | 12000 | 15000 | 15000 | 18000 |
| Max. Input Voltage (Vdc) | 500 | | | |
| Rated Input Voltage (Vdc) | 370 | | | |
| Start-Up Voltage (Vdc) | 70 | | | |
| MPPT Voltage Range (Vdc) | 60~450 | | | |
| No. Of MPPT/ Strings Per MPPT | 2 / 1+1 | | | |
| Max Input Current Per MPPT (A) | 20+20 | | | |
| Max. Short Circuit Current Per MPPT (A) | 27+27 | | | |
| **Grid Input/Output** | | | | |
| Rated AC Output Power (W) | 6000 | 8000 | 10000 | 12000 |
| Maximum Apparent Power (VA) | 6000 | 8000 | 10000 | 12000 |
| Rated Output Current (A) | 27.3/26.1/25.0 | 36.4/34.8/33.4 | 45.5/43.5/41.7 | 54.6/52.2/50 |
| Rated Grid Voltage (Vac) | 220/230/240±5% | | | |
| Voltage Input Range (Vac) | 90~280 | | | |
| Rated Grid Frequency (Hz) | 50 / 60 | | | |
| Frequency Range (Hz) | 40-65 | | | |
| Max Input Current (A) | 40 | 50 | 50 | 55 |
| Max Output Current (A) | 40 | 50 | 50 | 55 |
| Total Harmonic Distortion (THDi) | <3% | | | |
| **Gen** | | | | |
| Rated GEN Voltage (V) | 230 | | | |
| Rated GEN Input current (A) | 40 | | | |
| Rated GEN Input power(W) | 9200 | | | |
| **Load Parameter** | | | | |
| Rated Output Power (W) | 6000 | 8000 | 10000 | 12000 |
| Maximum Apparent Power (VA) | 6000 | 8000 | 10000 | 12000 |
| Rated Output Current (A) | 27.3/26.1/25.0 | 36.4/34.8/33.4 | 45.5/43.5/41.7 | 54.6/52.2/50 |
| Rated Output Voltage (Vac) | 220/230/240±5% | | | |
| Rated Output Frequency (Hz) | 50/60±0.1% | | | |
| Overload Capability | 1min@101-110%;10s@110% ~ 150%;5s@150% ~ 200%;100ms@ > 200% | | | |
| Switch Time (ms) | 4~6ms for Computer Equipment, 20ms for Household Equipment | | | |
| Total Harmonic Distortion (THDv) | <3% | | | |
| **Efficiency** | | | | |
| Max. Efficiency | 97.0% | | | |
| MPPT Tracking Efficiency | 99.9% | | | |
| **Protection** | | | | |
| Integrated | DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Power Network Monitoring, Earth Fault Detection,Surge protection level | | | |
| Surge Protection | TYPE II(DC), TYPE II(AC) | | | |
| Over Voltage Category | OVC II (DC), OVC III (AC) | | | |
| **General Data** | | | | |
| Operating Temperature (℃) | -40~+60 (Above 45℃ Derating) | | | |
| Humidity (%RH) | 0~100% | | | |
| Dimensions [W×H×D] (mm) | 430×350×177.8 | | | |
| Weight (kg) | 15.5 | | | |
| Inverter Topology | Non-Isolated | | | |
| Cooling | Smart cooling | | | |
| Altitude (m) | ≤3000 | | | |
| Protection Level | IP66 | | | |
| Communication | RS485 / CAN / Dry contact/ External battery NTC/Parallel communication/WIFI(Built-in) | | | |
| Display | LED Display/Touchable Display | | | |
| Warranty | 5 Years | | | |
| **Certification Standard** | | | | |
| Safety Standards | IEC 62109-1:2010, EN 62109-1:2010, IEC 62109-2:2011, EN 62109-2:2011 | | | |
| EMC Standards | EN IEC 61000-6-1:2019;EN IEC 61000-6-3:2021;EN IEC 61000-3-11:2019;EN61000-3-12:2011 | | | |
| Efficiency Standard | IEC 61683:1999 | | | |