

# DR PCS *Three-phase Hybrid Inverter*

**DR-PCS1230N6DF01**




## Product Introduction

This product is a core three-phase AC hybrid microgrid device integrating PV charging, grid-tied power feeding, diesel generation, intelligent utility grid access, and battery management. Adopting DSP full digital control and multi-mode algorithms (MPPT, PQ control, virtual synchronous generator, generator power coordination), it supports seamless switching between off-grid, on-grid and UPS modes. It is suitable for power-deficient areas (islands, remote villages), industrial and commercial backup power supplies, and high-reliability off-grid systems.

## Features and Functions

- Dual MPPT with 99.9% High Efficiency
- Dual Output Modes (Grid Bypass & Inverter) with UPS Function
- Multi-Protection (Over-Temp/Short-Circuit/Over-Current/Over-Under Voltage/Overload)
- LCD Dynamic Display + Remote Cloud Upgrades
- Grid-Tied Certified, Supports 3-Phase Imbalance
- IP65 Protection Leve
- Supports time-of-use charging/dischargingne l

# DR-PCS

| Model | DR-PCS1230N6DF01 |
|---|---|
| Rated Output Power | 12000W |
| **PV Input** | |
| Maximum PV Array Power | 22000W |
| Maximum PV Open-Circuit Voltage | 1000Vdc |
| MPPT Operating Voltage Range | 160~850Vdc |
| Start-Up Voltage | 160Vdc |
| Rated PV Input Voltage | 410Vdc |
| Maximum Input Current | 27A/27A |
| Short-Circuit Current (ISC) | 37A/37A |
| No. of MPP Trackers / No. of Strings MPP Tracker | 2/2+2 |
| **AC Input (Grid)/Genset input** | |
| Rated Voltage | 3L+N+PE/230/400Vac |
| Voltage Range | Phase voltage 170~280Vac，line voltage 305~485Vac |
| Frequency Range | 50Hz / 60Hz |
| Maximum AC Input Current | ≤35A |
| **AC Output (ON-GRID)** | |
| Rated Output Power | 12,000W |
| Rated Voltage / Current | 3L+N+PE/230/400Vac @17.4A |
| Output Voltage Range | Phase voltage 170~280Vac，line voltage 305~485Vac |
| Frequency Range | 50/45-55 Hz, 60/55-65 Hz |
| Power Factor Adjustment Range | > 0.99（0.8 leading to 0.8 lagging） |
| Total Current Harmonic Distortion THDi | <3% （of nominal power） |
| **AC Output (off-grid)** | |
| Rated Output Power | 12,000W |
| Rated Voltage / Current | 3L+N+PE/230/400Vac @17.4A |
| Selectable Voltage Range | Phase voltage 200Vac，208Vac，220Vac，230Vac，240Vac |
| Rated Output Frequency | 50/45-55 Hz, 60/55-65 Hz |
| Power Factor Adjustment Range | > 0.99（0.8 leading to 0.8 lagging） |
| Max. Continuous AC Passthrough (grid to load) | ≤35A |
| Peak Power (off-grid) | 2 times of rated power, 10s |
| Transfer Time | ≤10ms |
| Three-phase unbalanced output | Rated power @1.5 times |
| **Battery** | |
| Battery Type | Lead Acid / Lithium Battery |
| Battery Voltage Range | 40-60Vdc |
| Rated Battery Voltage | 48Vdc |
| Max.Hybrid Charging /Discharge Current | 250A |
| **Efficiency** | |
| Max. Efficiency | 97.0% |
| Euro Efficiency | 97.5% |
| MPPT Efficiency | 99.9% |
| **General Parameters** | |
| Certifications | IEC62109 / IEC61000 / IEC61683 / IEC61727 / IEC62116 |
| Machine Dimensions | 710*475*250mm |
| Net Weight | 42kg |
| Display | LCD+APP |
| Communication Interface | USB / RS485 / CAN / Dry Contact / Wi-Fi(Supports) |
| Permissible Ambient Humidity | 0 -100% |
| Operating Temperature | -25 to +60℃, >45℃ Derating |
| Max. Operating Altitude | ≤3000m |
| Cooling Method | Intelligent air-cooling |
| Protection Level | IP65 |
| Over Voltage Category | OVC II(DC), OVC III(AC) |
| Inverter Topology | Non-Isolated |
| Number of Paralle | 6 units |
| Warranty | 5 Years |