

CPS 7.6-12 kW Single-Phase Hybrid Inverters for North America



CPS ECH7.6-12K/US Hybrid Inverter

CPS is excited to introduce the 7.6 kW, 9.6 kW, and 12 kW single-phase hybrid inverters to the North American market. The new Power Leaf solution includes a hybrid inverter that allows the connection of solar PV, battery storage, and/or generator power.

High energy density, flexible configuration, and an advanced energy management system (EMS) enables seamless transfer between grid-tied and off-grid modes. The single-phase hybrid inverter can be AC or DC coupled with an onsite PV array and has a generator input terminal allowing flexibility.

Key Features

- NEC 2017/2020 PVRSS certified for rapid shutdown
- NEC compliant and UL listed arc-fault circuit protection
- Integrated AC and DC disconnect switches
- Separable wire box design for fast service
- 3 MPPTs with 2 PV inputs each for maximum flexibility
- Internal automatic double bypass function with no need for an external gateway or bypass switch
- Advanced EMS with configurable modes
- PV, Battery, and Generator inputs
- Full power capacity up to 113° (45°C)
- NEMA Type 4X outdoor rated enclosure
- UL 9540 certified with CPS 5-60 kWh battery

| Product Model | CPS ECH7.6K/US | CPS ECH9.6K/US | CPS ECH12K/US |
|---------------------------------------|--|------------------------------|----------------------------|
| PV Input | | | |
| Max. PV input power | 11.4 kW (7.5 kW per MPPT) | 14.4 kW (7.5 kW per MPPT) | 18 kW (7.5 kW per MPPT) |
| Max. PV input voltage | 600 V _{DC} | | |
| Operating PV input voltage range | 120-550 V _{DC} | | |
| MPPT voltage range | 150-480 V _{DC} | | |
| Startup voltage | 150 V _{DC} | | |
| Number of PV inputs | 6 inputs, 2 per MPPT, non-fused | | |
| Max. input current (clipping point) | 30 A | | |
| DC disconnection type | DC switch | | |
| Short-circuit current per MPPT | 40 A | | |
| Battery Input | | | |
| Battery type | Lithium-ion (CPS 5-20 kWh batteries) | | |
| Battery voltage range | 40-60 V | | |
| Max. charge/discharge current | 200 A / 152 A | 200 A / 192 A | 200 A / 200 A |
| Max. charge/discharge power | 10 kW / 7.6 kW | 10 kW / 9.6 kW | 10 kW / 10 kW |
| Generator Input | | | |
| Max. input current | 100 A | | |
| Max. input power | 24 kW @ 240 Vac | | |
| Operating input voltage range | 211.2-264 Vac (@ 240 Vac) | | |
| Full power input voltage range | 240-264 Vac (@ 240 Vac) | | |
| AC Output (Grid) | | | |
| Max. input current (on grid) | 200 A | | |
| Max. output current | 31.7 A | 40 A | 50 A |
| Max. output apparent power | 7.6 kVA | 9.6 kVA | 12 kVA |
| Standby / night consumption | < 50 W | < 50 W | < 60 W |
| Output voltage range | 183-228.8 Vac (@ 208 Vac) / 211.2-264 Vac (@ 240 Vac) | | |
| Max. OCPD rating | 200 A | 250 A | 250 A |
| Output frequency | 60 Hz | | |
| Grid connection type | Split phase with N | | |
| Rated grid frequency range | 57-63 Hz | | |
| Output voltage | 240 V / 208 V (120 Vac) | | |
| Current TRD @ rated load | < 3% | | |
| Power factor | > 0.99 (adjustable ±0.8) | | |
| Backup Port | | | |
| Max. output current (on grid) | 200 A | | |
| Max. output current (off grid) | 31.7 A | 40 A | 50 A |
| Max. output apparent power (off grid) | 7.6 kVA | 9.6 kVA | 12 kVA |
| On-grid / off-grid switching time | 20 ms | | |
| General Data | | | |
| Operating temperature range | -13°F to 140°F (-25°C to 60°C) / humidity up to 100% | | |
| Cooling method | Variable speed cooling fan | | |
| Audible noise | < 45 dB @ 1 m and 77°F (25°C) | | |
| Dimensions (H × W × D) | 36 × 20.4 × 9.3 in (912 × 518 × 234 mm) | | |
| Weight | Inverter: 101.7 lb (46.2 kg) Wire box: 37.2 lb (16.9 kg) | | |
| User interface and display | LED, app, and web portal via Wi-Fi connection ¹ | | |
| Inverter monitoring | Wi-Fi | | |
| Protection degree | NEMA 4X | | |
| Max. efficiency | 97.5% | | |
| CEC efficiency | 96.5% | | |
| Surge protection | DC Type II / AC Type II | | |
| Standard Compliance | | | |
| Certifications and standards | CSA 107.1-16, UL 1741/SA, UL 1741 SB, UL 1998, UL 1699B, FCC Part 15 | | |
| Selectable grid standards | IEEE 1547-2018, HECO, CA Rule 21 | | |
| Warranty | | | |
| Standard | 10 years | | |

1) Wi-Fi network connection required for web portal communication.