Digital Power®
Flexible Power Solutions

(877) 634-0982
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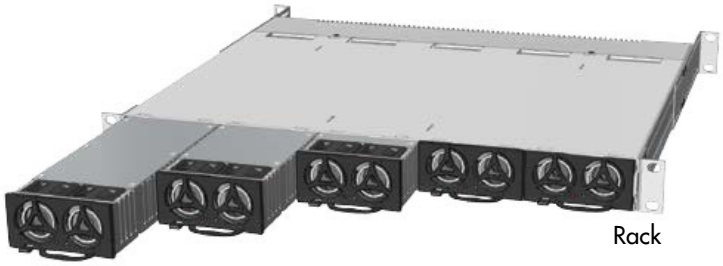
# DPAMPS3000-Advance Modular Power System

## Front End 12/24/48V 3000W

## Product Specification

19" 6U Power Rackmount System



Rack

### Key Product Features

- Highest power density in the market (3.35"x1.61"x11.8")
- High efficiency, typically 97%
- Hot-pluggable
- Internal ORing MOSFET diode
- Active current share
- Operates with or without batteries
- Suitable for N+1 redundancy
- Control and Monitoring via Ethernet, RS485 and CAN bus

### Applications

- Telecom - mobile/wireless/fixed
- Data centers
- Servers and computers
- Broadband and network access

## Description

The AMPS3000 front end series is a compact, highly efficient 1U power system consisting of a 1U 19"rackmount chassis, containing up to 5 hot-pluggable power modules operating in current sharing mode, enabling n+1 redundancy and, up to 15KW per rack. Higher power levels can be accomplished by using several racks.
The AMPS3000 system controller offers local and remote control and monitoring through a variety of interfaces including Ethernet, PMBus, RS485 and CAN bus. It fits in the rack in place of the power module.
The AMPS3000 is a perfect fit for today's telecom and data center industry due to its high reliability.

## Standard AMPS Power Supply Modules

| Model | Adjust Range | Output Voltage | Max. Current | Max. Power |
|---|---|---|---|---|
| DPAMPS3000-48 | 40~56V | 48V | 62.5A | 3000W |
| DPAMPS3000-24 | 20~30V | 24V | 105A | 2500W |
| DPAMPS3000-12 | 10~14V | 12V | 150A | 1800W |

## Rack Selector

| Model | Description | Max. Current |
|---|---|---|
| DPAMPS15K-1U | Five slots, 19" rack, IEC 320- C16 Input connectors (5) | 262.5A each side (525A total) |
| DPAMPS15K-1U-TB | Five slots, 19" rack, terminal block Input connectors (5) | 262.5A each side (525A total) |

## Product Specification

| Model | DPAMPS3000-48 | DPAMPS3000-24 | DPAMPS3000-12 |
|---|---|---|---|
| **Input** | | | |
| Input Voltage | 90-264Vac 47-63Hz see model selected for power derating | | |
| Input current Max. (100/220) | 15/15A | 15/12A | 12/6A |
| Power factor | >0.99 at 50% load and more | | |
| Inrush current | <40A | | |
| Efficiency | >96% for 208-264Vac | | |
| Leakage current | Less than 1.1mA at 230Vac | | |
| Turn ON | 87 – 90Vac | | |
| Turn OFF | <80Vac | | |
| **Output** | | | |
| Nominal Output Voltage | 48V | 24V | 12V |
| Maximum Power (100/220) | 1400/3000W | 1400/2500W | 1800W |
| Maximun Current | 62.5A | 105A | 150A |
| Line & Load Regulation | ±0.5% from 10 to 100% load | | |
| Ripple & Noise (p-p) | <300mV | <200mV | <150mV |
| Hold-up time | >20mSec | | |
| Current Share | ±5% Maximun, N+1 Redundancy Single wire | | |
| Output Voltage Adj. Range | ±10% | | |
| Remote Sense per line | 1V | 0.5V | 0.25V |

## Protection

| | |
|---|---|
| Over-current Protection | 105 to 125% of IMax, constant current limit, automatic recovery, when cause of overload or short is removed |
| Over-voltage Protection | Shut down at 110, 130% of nominal output, AC input must recycled to restart. |
| Temperature protection | Shutdown due to excessive ambient temperature at over heating or malfunction of cooling fans, unit recovers automatically typical hysteresis 25°C |

## Signal & Commands

| | |
|---|---|
| Remote ON / OFF control | By electrical signal or dry contact, ON 0-0.6V or short OFF 2-15V or open. Open collector active high when the output drops 10% below nominal. |
| DC_OK | Open collector active high when the output drops 10% below nominal |
| AC_OK | Open collector active high when AC out of range |

## Visual Indication

| | |
|---|---|
| AC_OK | Green LED illuminates for AC OK |
| DC_OK | Green LED Illuminates dor DC OK |

## I/O

The communication bus provides information about internal rectifier conditions as well as full control of outputs current, voltage and alarming setpoints

## Environment

| | |
|---|---|
| Operating Temperature | -20°C to +70°C (de-rating linearly from 50 °C, 2.5% / °C) |
| Storage Temperature | -40°C to +85°C. |
| Temperature Coefficient | 0 to 70°C ± 0.02%/°C |
| Cooling | By internal fans, Variable speed control |
| Humidity | 10 to 90% RH non-condensation |
| Altitude | Operating 10,000 ft. Non- operating 40,000 ft |
| Vibration and Shock | Meet ETS 300 019 |

## Safety Approvals, Regulatory, and EMC Specifications

| | |
|---|---|
| EN55022 CLASS B, CISPR 22 CLASS B, FCC CLASS B | |
| EN61000-3-2 | HARMONICS |
| EN61000-3-3 | VOLTAGE FLUCTUATION |
| EN6000-4-2 | ESD +8KV AIR +4KV CONTACT DISCHARGE, performance criteria B |
| EN61000-4-3 | Radiated Immunity: 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A |
| EN61000-4-4 | FAST TRANSIENT: 1KV for AC power port, 0.5KV for DC power I/O and signals Port, performance criteria B |
| EN61000-4-5 | SURGE: 2KV common mode and 1KV differential mode |
| EN61000-4-6 | 3VRMS, 80% A.M. BY 1kHz |
| N61000-4-8 | 3A /m at 50Hz, performance criteria A |
| EN61000-11 | VOLTAGE Dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C |
| Safety Agency Certification | UL60950, EN60950-1 , CE Mark |
| MTBF | 300,000 hours minimum per BELCOR 332,issue 6 specification @ 30°C |

## Mechanical Specifications

| | | |
|---|---|---|
| Dimensions | Module: 85, 40.9, 299.72mm<br>Rack: 444.5, 43.7, 365.8mm | 3.35”, 1.61”, 11.8”<br>17.5”, 1.72”, 14.4” |
| Weight | Module: 2Kg /4.41lb \| | Rack: 15Kg / 34lb (Including 5 Modules) |
| I/O Connector | P.S- Positronic Right Angle PCB mount PCIM30W15M400A1/ AA | |
| Mating Connector | Positronic type PCIM30W15F400A1/ AA | |

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Digital Power Corporation designs and manufactures flexible power supply solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets. With headquarters in Fremont, California, Digital Power is publically traded on the NYSE (symbol: DPW). The company was founded in 1969 incorporated in California.