

Spacecraft Power Distribution Units

Spacecraft Power Distribution Units (PDUs)

DESIGN HIGHLIGHTS

Wide range of Voltage and Current Distribution

Class A/B Design

Flexible Distribution Voltages from 28V to 270V

Currents up to 500A

Wide Range of Switch Options

FLEXIBLE POWER INPUTS

Interfaces with Batteries, Solar Arrays

Manages Multiple Power Inputs

Source Prioritization

Active MOSFET OR-ing, Load Sharing

FLEXIBLE POWER OUTPUTS

Multiple Power Output Options:

Time Delay Overcurrent Trip

Constant Current Limiting

Foldback Current Limiting

COMMUNICATION & TELEMETRY

MIL-STD-1553 Command/Control

Voltage, Current & Temperature

Current Telemetry on all Output Feeds

MISSION CRITICAL DESIGN

EEE Parts Selection per:

EEE-INST-002 / MSFC-STD-3012

Radiation-Hardened: 50kRAD

MIL-STD-461 EMC Tests



Model: PDUFA1000

ZIN has extensive experience creating power distribution solutions tailored to our customers' need.

Power Distribution is a key challenge for spacecraft designers. ZIN answers this challenge with innovative Power Distribution Units (PDUs) that provide our customers with the ability to control and manage spacecraft power with ease.

ZIN's Power Distribution Units are Space-Grade, radiation hardened designs that power critical missions, most recently as part of NASA's Commercial Crew program.

ZIN has developed PDUs that power both high voltage systems (flight actuators, thrust vector controllers, satellite power busses) as well as low voltage systems (avionics, flight computers, and communications).

The PDUs accept switching commands from a Flight computer, and then communicate back switch status and telemetry. ZIN offers high-speed current telemetry on each output switch that is ideal for load diagnostics and fault detection. The PDUs are designed for mission critical applications, and therefore feature internal redundancy.

- ❑ ZIN's PDUs connect to common spacecraft power sources such as batteries, solar panels, and ground power.
- ❑ The PDUs control the flow of power from multiple sources, with features such as on/off switching, source prioritization, active MOSFET OR-ing, and load sharing.
- ❑ ZIN offers a wide variety of output switch options to meet the needs of diverse loads, including time-delay overcurrent switches, constant current limiting switches, and foldback limited switches.
- ❑ ZIN has developed a library of power switch, telemetry, control, and communication options that allow us to exceed customer expectations quickly and economically.
- ❑ Space-Rated architecture.
- ❑ EEE parts controls to Level 2 available.



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Voyager Space External Use

johansonm@zin-tech.com | www.zin-tech.com