

Aerospace Electronics PDU Power Distribution Unit Size Parameters

Ordering information

NO.	1	2	3	4	5	6
Model	SP12H1	SP12H2	SP48H4	SP6H1	SP12H2	SP12H4
Product name	Patch Panel	Patch Panel	Patch Panel	Patch Panel	Patch Panel	Patch Panel
Illustration						
HU	1	2	4	1	2	4
Maximum number of cores	144	288	576	144	288	576
Product size (including modules and adapters)	482.0*100*144 mm	482.0*100*177 mm	482.0*100*177 mm	482.0*100*144 mm	482.0*100*177 mm	482.0*100*177 mm
Standard color code	RAL9005	RAL9005	RAL9005	RAL9005	RAL9005	RAL9005
Inventory	✓	✓	✓	✓	✓	✓

Overview

HARTMAN AC and DC power distribution units (PDUs) and KILOVAC DC PDUs from TE Connectivity are designed, built and qualified to meet your specific requirements.

Key Takeaways

Aerospace PDUs are designed to be compact, lightweight, and modular, with dimensions tailored to aircraft or spacecraft integration, typically specified in millimeters and optimized for weight, thermal management, and accessibility.

General Size Considerations

Aerospace PD

Us are engineered to maximize power density while minimizing weight and volume. Typical design approaches include: Compact modular units or backplane-type panels for fixed-wing aircraft or rotorcraft, allowing integration of bus-bars, contactors, relays, sensors, and circuit breakers into a single assembly (dimensions are usually provided in millimeters for reference). Scalable and customizable modules that allow front-access installation and replacement of circuit breakers without panel hardware, reducing overall footprint and assembly complexity.

Composite structures and embedded bus work to optimize thermal performance and reduce weight, which also influences the overall size envelope.



Typical Aerospace PDU Dimensions

While exact dimensions vary by manufacturer and application, reference designs indicate: TE Connectivity PDUs: Dimensions are provided in millimeters and vary depending on voltage and contactor type (e.g., 28V DC, 270V DC, AC contactors).

Eaton APD

Us: Designed for high integration, these units eliminate point-to-point wiring and use embedded bus work, allowing a smaller, lighter footprint compared to traditional PDUs.

Airbus Space PD

Us: Modular units for spacecraft can handle 1 kW to over 10 kW, with compact, lightweight designs optimized for LEO and GEO missions. Example: PureLine Pearl units provide 22V–38V output in a highly compact envelope.

Design Features Affecting Size

Modularity: Front-access replaceable modules reduce the need for large panels and allow flexible sizing. Thermal management: Embedded thermally conductive, electrically insulative materials allow heat dissipation without increasing external dimensions. Integration of multiple functions: Combining relays, contactors, and circuit breakers into a single assembly reduces overall volume.

Application-specific customization: Military, commercial, and space applications may require different size envelopes depending on power levels, redundancy, and environmental constraints.

Summary

Aerospace PD

Us are compact, lightweight, and modular, with dimensions typically specified in millimeters. Their size is influenced by power requirements, thermal management, modularity, and integration of multiple components. Manufacturers like TE Connectivity, Eaton, AMETEK, Skurka Aerospace, and Airbus provide reference designs that balance space efficiency, maintainability, and reliability for both aircraft and spacecraft applications.

Article Content

TE_Cover+Spine Master.qxp

HARTMAN AC and DC power distribution units (PDUs) and KILOVAC DC PDUs from TE Connectivity are designed, built and qualified to meet your specific requirements. We have a half-century of

Primary Power Distribution Units

Our Aerospace specific Primary Power Distribution unit (PDU) provides primary power bus connectivity, transfer, and distribution functions to the aircraft loads. It

Power Management Solutions (PDU) | Amphenol Aerospace

Intelligent military power management solutions feature the latest technology, offering extensive user configuration capabilities to achieve custom power management solutions for specific application needs.

AMPHION Power Distribution Units

APPLICATIONS up to 45 amps DC or AC per unit. Reliability is also dramatically increased since AMPHION solid state switches do not wear out like convent

Power Distribution Unit (PDU)

It supports both high and low voltage direct current (DC) with up to 270 volts DC per breaker, as well as supporting up to 115 volts of alternating current (AC) at 400 hertz. A PDU unit also includes

DC Power Distribution Unit

Spectrum Control Inc is introducing a new • For Aerospace, Defense and Industrial best in class AC & DC PDU product line. High performance, a full feature set and a ruggedized design combined with a

Advanced Power Distribution Unit

Current sensing, arc-fault detection, and lightweight generator contactors are all well adapted for customized power distribution units using the integrated APDU design approach.

Power Distribution Units (PDUs) | Skurka Aerospace, Inc

Skurka Aerospace's proprietary Power Distribution Units (PDU) offer the following functions and features: All PDUs are manufactured and tested in our facility in Camarillo, CA, with complete repair

Power Distribution Unit – Brancaro Industries

Compact dimensions, low weight and power ratings makes it a perfect solution for an EASA-Certified UAV in the 100 Kg to 450 Kg MTOW. The PDU is a dual

Power Conditioning and Distribution

Our expertise in Power Conditioning and Distribution Units (PCDU) design is recognized industry-wide, and we have played a critical role in several high-profile missions.

Modular and Highly Reliable COTS-Based Power

This paper presents a modular Power Conditioning and Distribution Unit (PCDU) designed for small satellites. The proposed system features a

Power Distribution Units (PDUs) | Skurka Aerospace, Inc

Skurka Aerospace's proprietary Power Distribution Units (PDU) offer the following functions and features: Solid State Power Switching Power Conversion Generator Protection and Monitoring Low

Efficient Power Conditioning: Enhancing Electric Supply for Small ...

Electric power supply (EPS) is the heart of any aerospace mission and plays an important role in improving the performance and service lifetime of spacecraft. It generates, converts, stores,

AMPHION Power Distribution Units

DESCRIPTION AMETEK's Power Distribution Unit (PDU) will save weight, space, and cost on your aircraft by replacing centralized circuit breaker and relay panels allowing for power to be distributed

Multi-Channel, Constant-Current Power Source for Aircraft Applications

We discuss the development of a 16-channel, 3-kW, constant-current power distribution unit (PDU) for aircraft applications. Electrical loads, such as lighting, de-icing heaters, and actuators may be

Power Distribution Units (PDU) Specifications

Find Power Distribution Units (PDU) on GlobalSpec by specifications. Power distribution units (PDUs) have an electrical input and several outputs, often as electrical outlets, for powering multiple devices.

Aircraft Power Distribution

CorePower ® aircraft power distribution systems from Astronics replace traditional mechanical breaker systems with intelligently controlled solid-state switches to provide next-gen reliability and safety.

Next-Generation Power Distribution Unit Showcases Eaton''s

The aircraft power distribution unit (PDU) is a prime example of Eaton''s proven component expertise and packaging capabilities as an electrical sub-system supplier.

Contact Us

Continue your research online:

Website: <https://cgweb.co.za>

Technical inquiry: <https://cgweb.co.za/project-enquiry.html>

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

