

270Vdc Aircraft Power Supplies

PXe-270DC Series | 5kW to 45kW | Up to 167A at 270Vdc

The PXe-270DC Series provides regulated 270Vdc power for aircraft electrical systems, avionics, aerospace production, MRO and specialist test applications.

Available up to 45kW, the range is configured around the required continuous current, transient load, facility input supply and aircraft or subsystem interface. Dedicated 270Vdc systems complement the PXe-F 400Hz and PXe-400F-DC combined aircraft power ranges.



Typical PXe-270DC aircraft power supply.

Where this product fits

Best suited to dedicated 270Vdc aircraft power where a stable DC source is required for maintenance, production, avionics or electrical integration. The platform is relevant to modern military aircraft support environments, including 270Vdc systems associated with F-22 and F-35 programmes, without implying aircraft OEM approval.

Typical applications

Aircraft MRO, avionics and LRU testing, aerospace production, subsystem integration, 270Vdc bus simulation and specialist military aircraft support.

Power range

Standard ratings from 5kW to 45kW, providing approximately 18.5A to 167A at 270Vdc. Intermediate ratings are available.

Installation formats

Floor-standing cabinet construction is typical, with fixed or mobile arrangements and higher enclosure protection available to suit the installation.

Rated range
5kW to 45kW

Maximum current
Approx. 167A at 270Vdc

Output
Regulated 270Vdc

Duty
Continuous aircraft support

Selection starting point

Confirm the available AC input supply, required output power, continuous and transient current, load type, intended installation and whether direct aircraft connection or an application-specific interface is required.

Configuration and model selection

A practical route from facility supply and aircraft load data to the correct 270Vdc system

1. Supply Voltage, phase and frequency	2. Load kW, continuous current and transients	3. Output 270Vdc and required current	4. Project Enclosure, controls, interface and FAT
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Standard model range

Model	Output power	Approx. current	Typical format / use
PXe-270DC-005	5kW	18.5A	Avionics, component and bench test
PXe-270DC-010	10kW	37A	Subsystem and production test
PXe-270DC-020	20kW	74A	Integration and larger subsystem loads
PXe-270DC-030	30kW	111A	Typical MRO and aircraft electrical support
PXe-270DC-045	45kW	167A	Higher-power MRO and aircraft systems

Initial sizing guidance

Select the converter from continuous output power and current, then check short-duration or rapidly changing load demand. Aircraft electrical systems with significant transient current should be reviewed from the actual load profile rather than nominal kW alone.

Input supply

230V single-phase can be used at selected lower ratings. 400V, 415V or 480V three-phase input is typical for higher-power systems.

Aircraft load and transients

Continuous current, short-duration demand and voltage recovery requirements can determine the final converter rating and interface arrangement.

270Vdc output

The standard output is regulated 270Vdc. Current limiting and protection are configured to suit the selected model and connected equipment.

Controls and interface

Local monitoring is standard to the selected controller, with RS485, Ethernet, remote control and application-specific aircraft interfaces available.

Order code example

Example: PXe-270DC-030-3P400V50-270VDC-IP54-RS485. Final part number confirmed in the quotation.

Technical specification

Typical series values. Final values are confirmed in the quotation and project specification.

1. Range and construction		2. Input	
Rated output	5kW to 45kW; intermediate ratings available	Supply phase	Single-phase at selected lower ratings; three-phase typical
Output current	Approx. 18.5A to 167A at 270Vdc	Common voltages	230V 1-phase; 400V, 415V or 480V 3-phase
Conversion method	Solid-state AC-DC conversion to regulated 270Vdc	Input frequency	50Hz or 60Hz according to configuration
Construction	Floor-standing cabinet; fixed or mobile formats	Input tolerance	Confirmed for selected model and facility supply
Cooling	Forced-air cooling; arrangement confirmed by rating	Power factor	Confirmed for selected model and input configuration
Application	Aircraft MRO, avionics, production and test systems	Input protection	Input breaker / protection arrangement by rating
3. Output performance		4. Protection, control and environment	
Output voltage	270Vdc nominal regulated output	Protection	Over-voltage, over-current, over-temperature and short-circuit protection
Maximum power	45kW	Interfaces	RS485, Ethernet and remote-control options
Maximum current	Approx. 167A at 270Vdc	Display / metering	Output voltage, current and operating status
Current limiting	Available according to selected controller	Enclosure	Standard indoor construction; IP54 option available
Transient response	Selected against aircraft or subsystem load profile	Environment	Installation limits confirmed for selected model and project
Output connection	DC terminals or application-specific cable assembly	Aircraft interface	Cable, connector and interlock options where required
Specification basis		Dimensions and weight	
Values shown are typical for the PXe-270DC Series. Exact regulation, transient performance, protection settings, interfaces and environmental limits are confirmed in the quotation and project specification after the connected load has been reviewed.		Dimensions and weight are issued at quotation stage because output power, input supply, enclosure/IP rating, cooling, mobility, cable entry and aircraft interface options affect the final construction.	
		Documentation and compliance	
		Each system is supplied with a project specification, operating manual and Certificate of Conformity. Drawings and FAT records are supplied where included. Applicable aircraft or programme requirements are reviewed against the selected configuration.	

Options, project support and quotation information

Configuration choices are reviewed against the aircraft load, installation and project evidence required.

Mechanical and enclosure options IP54 construction, mobile bases, special cable entry, output cable management and customer-defined terminal or connector arrangements.	Control and monitoring options RS485, Ethernet, remote monitoring, volt-free contacts, remote panels and project-specific control or interlock arrangements.
Electrical and aircraft interface options Alternative AC inputs, application-specific current limits, high-current 270Vdc cables, aircraft connectors and interlock arrangements where required.	Testing and site support Optional FAT, customer or third-party witness testing, load testing, commissioning visits, engineer training, drawings and support records.

Project support

FAT Optional load and functional testing	Witness testing Customer or third-party attendance	Commissioning Available for aircraft and MRO systems	After-sales Seven-day technical support where required
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Information required to prepare a quotation

Supply Input voltage, phase and frequency	Output Required power and 270Vdc current	Load Continuous and transient demand
Duty MRO, test, production or aircraft support	Installation IP rating, cooling and mobility	Interface Cables, connectors, interlocks and controls

Lead times, dimensions and weight

Standard products are typically 3-5 weeks. Customer-defined, higher-power or application-specific systems are commonly 6-8 weeks, subject to quantity and specification. Dimensions and weights are issued at quotation stage for the exact configuration.

Discuss your requirement

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