

400Hz / 28Vdc Aircraft Ground Power Units

PXe-330000-400F-DC Series | 0.5kVA to 200kVA AC | Larger models on request

PXe combination ground power units provide regulated 400Hz AC and 28Vdc power from a conventional facility supply. The system is intended for aircraft maintenance, avionics testing, production lines, hangar support and specialist ground-power applications where both AC and DC outputs are required.

AC and DC outputs can be configured for simultaneous use, reducing the need for separate ground-power equipment. Fixed and mobile formats are available with aircraft cables, connectors, interlocks, remote controls and project-specific current ratings.



Typical combined 400Hz / 28Vdc ground-power unit.

Where this product fits

Best suited for MRO, aerospace production and aircraft support areas that need both 115/200V or 120/208V 400Hz AC and regulated 28Vdc from one unit. The AC kVA rating and DC current are selected around the aircraft or test requirement.

Typical applications

Aircraft ground power, avionics testing, MRO hangars, production line testing, aircraft electrical-system support and defence aviation facilities.

Combined outputs

Three-phase 400Hz AC and regulated 28Vdc can be supplied from one cabinet and configured for simultaneous operation.

Fixed or mobile installation

Trolley, cabinet and project-specific formats are available with aircraft cables, connectors, interlocks and remote controls.

AC rated range
0.5kVA to 200kVA

Larger models
Available on request

AC output
Three-phase 400Hz

DC output
28Vdc, current selected to project

Selection starting point

Confirm the facility supply, 400Hz voltage and kVA, required 28Vdc current, whether both outputs operate simultaneously, aircraft cable and connector details, duty cycle, mobility and any interlock or remote-control requirements.

Configuration and model selection

A practical route from site supply and load data to the correct converter specification

1. Facility supply Voltage, phase and 50/60Hz input	2. AC requirement 400Hz voltage, kVA and load	3. DC requirement 28Vdc current and duty	4. Installation Cables, connectors, mobility and control
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Typical rating bands

AC rating band	Typical format	Common use	Selection note
0.5-3kVA	Rack / compact	Avionics modules and small bench systems	Confirm DC current and simultaneous duty
5-15kVA	Rack / trolley	Aircraft component testing and workshop support	Review cable length and connector
20-45kVA	Trolley / cabinet	MRO, hangar and production applications	Confirm AC/DC load sharing and duty
60-100kVA	Floor cabinet	Larger aircraft support and test facilities	Remote control and interlock often required
150-200kVA	Project cabinet	High-power ground support and major test installations	Project FAT and commissioning recommended

Initial sizing guidance

The 400Hz kVA and 28Vdc current are reviewed separately, then checked for simultaneous operation, cable voltage drop, aircraft connector duty and any starting or transient demand. Final ratings are confirmed from the aircraft or test-system load data.

AC output arrangement

Common 400Hz AC outputs are 115/200V or 120/208V three phase. Alternative voltages and adjustable output options can be provided.

28Vdc output arrangement

The DC current rating is selected to the connected aircraft system, avionics load or test duty. Continuous and transient requirements should be stated.

Aircraft cables and interlocks

AC and DC cable assemblies, MIL-STD or customer-selected connectors, aircraft interlocks and project-specific terminations are available.

Simultaneous operation

The unit can be configured to supply both AC and DC outputs at the same time, subject to the selected ratings and project design.

Order code example

Example: PXe-330100-400F-DC-3P400V50-3P200V400-28VDC-100KVA-IP22-MC. 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	
AC rated output	0.5kVA to 200kVA; larger models on request	Supply phase	Single-phase or three-phase input, depending on rating and project
Outputs	Three-phase 400Hz AC plus regulated 28Vdc	Common voltages	110-240Vac single phase; 200-220V, 380-415V, 440V, 480V or 690V three phase
Conversion method	Solid-state AC-DC-AC conversion with integrated DC output stage	Input frequency	50Hz or 60Hz; other inputs on request
Isolation	Transformer-isolated AC output; DC arrangement confirmed by project	Input tolerance	Typically +/-5% to +/-10%, confirmed for selected model
Construction	Rack, trolley, floor cabinet or project cabinet	Power factor	Typically >=0.8 standard; higher-PF options available
Cooling	Filtered forced-air cooling, arrangement confirmed by rating	Harmonic mitigation	Optional 12-pulse or 18-pulse rectifier arrangements
3. Output performance		4. Protection, control and environment	
AC output voltage	115/200V or 120/208V three phase typical; alternatives available	Protection	Over-current, overload, over-voltage, over-temperature and short-circuit protection on AC/DC sections
AC output frequency	400Hz; adjustable and specialist ranges on request	Interfaces	RS232, RS485, Ethernet, GPIB, volt-free contacts, remote panel and interlock options
DC output	28Vdc; current rating selected to aircraft or test requirement	Display / metering	AC voltage, current, frequency and power plus DC voltage and current indication
Accuracy	Voltage typically within +/-1% FS; frequency within +/-0.1% FS	Enclosure	IP22 standard; IP32, IP54 and project-specific formats available
Waveform / THD	Pure sine-wave AC output; THD typically <=3% at linear load	Environment	-10C to 55C operation; 10-90% RH non-condensing; altitude typically <=1800m
Overload / simultaneous duty	Protection above rated output; AC/DC simultaneous operation confirmed by project	Efficiency / reliability	Efficiency typically >=85%; MTBF 50,000 hours
Specification basis		Dimensions and weight	
Values shown are typical for the PXe series. Exact tolerances, regulation, overload performance, 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 kVA rating, input and output voltage, phase arrangement, enclosure/IP rating, cooling, mobility, cable entry and selected 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 standards are reviewed against the selected configuration and application.	

Options, project support and quotation information

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

Aircraft AC and DC connection options

Separate AC and DC cable assemblies, MIL-STD and customer-selected connectors, aircraft interlocks, cable storage, cable lengths selected for voltage drop and project-specific termination panels.

Mechanical and environmental options

IP54 enclosures, conformal coating, rack construction, trolley or mobile bases, tow bars, castors, lifting points, special cooling and customer-defined cabinet layouts.

Control and monitoring options

Remote control panels, RS485, Ethernet, volt-free contacts, AC/DC status indication, remote watchdog monitoring, data logging and automatic restart subject to project review.

Testing, commissioning and training

Optional FAT for both AC and DC outputs, simultaneous-load testing, customer or third-party witness testing, site commissioning, engineer training, drawings, manuals and Certificate of Conformity.

Project support

FAT

Optional AC, DC and simultaneous-load testing

Witness testing

Customer or third-party attendance

Commissioning

Available for hangar and larger projects

After-sales

Seven-day technical support where required

Information required to prepare a quotation

Supply

Input voltage, phase and frequency

400Hz AC

Voltage, kVA, PF and load type

28Vdc

Continuous and transient current

Duty

Separate or simultaneous operation

Connection

Cable length, connector and interlock

Installation

Fixed/mobile, IP rating and controls

Lead times, dimensions and weight

Standard products are typically 3-5 weeks. Customer-defined, larger or multi-unit ground-power 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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