

PXe-A Series Variable AC Power Supplies

Single-phase and three-phase systems | 0.5kVA to 500kVA

The PXe-A Series provides adjustable AC voltage and frequency for product development, production testing and controlled operation of electrical equipment. Single-phase and three-phase configurations are available, with input and output arrangements selected around the site supply and connected load.

Solid-state AC-DC-AC conversion, IGBT PWM regulation, transformer isolation and front-panel measurement provide a stable sine-wave source without relying directly on fixed site mains. Bench, rack, trolley and floor-standing formats are available according to rating.



Typical rack-mounted PXe-A Series unit. Cabinet and mobile formats are available at higher ratings.

Where this product fits

Best suited where equipment must be operated or tested at controlled voltage and frequency rather than directly from the available mains supply. It supports product development, production test, imported equipment, export validation and specialist AC loads.

Typical applications

Laboratory development, production testing, imported equipment, motors, transformers and international mains compatibility work.

Phase configurations

Single-phase or three-phase input and output arrangements are selected around the available supply and connected load.

Output flexibility

Fixed or adjustable voltage, common 50/60Hz duties and wider-frequency test ranges are available by configuration.

Single-phase range

0.5kVA to 200kVA

Three-phase range

1kVA to 500kVA

Voltage range

Up to 0-520V AC

Frequency range

40Hz to 500Hz optional

Selection starting point

Confirm the available input supply, required output phase, voltage range and frequency, continuous current and kVA, load type, power factor, crest factor, starting current, duty and preferred enclosure.

Configuration and model selection

A practical route from site supply and load data to the correct variable AC source

1. Site supply Voltage, frequency and phase	2. Load kVA, load type and starting current	3. Output Phase, voltage range and frequency	4. Installation Rack, trolley, cabinet and control
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Typical rating bands

Rating band	Typical format	Common use	Selection note
0.5-3kVA	Bench / rack	Laboratory, electronics and small test stations	Confirm crest factor and transient demand
5-15kVA	Rack / trolley	Workshop equipment, validation rigs and small machinery	Review motor or transformer inrush
20-60kVA	Trolley / cabinet	Production equipment and continuous technical loads	Three-phase input may be preferable
75-200kVA	Floor cabinet	Larger single-phase or three-phase plant and test loads	Review cable entry, cooling and protection
300-500kVA	Project cabinet	High-power three-phase systems and multi-load installations	Project design and FAT recommended

Initial sizing guidance

Resistive and steady electronic loads can usually be sized from verified continuous kVA. Motors, compressors, transformers and rectifier-fed loads may require additional capacity. PX reviews starting current, duty cycle, power factor and transient demand before confirming the rating.

Voltage arrangement

Single-phase ranges include 0-150V and 0-300V AC. Three-phase systems can be configured up to 0-260V L-N or 0-520V L-L.

Load behaviour

Provide power factor, crest factor and inrush information where available. Unknown starting current can materially affect the recommended rating.

Enclosure and mobility

IP22 is standard, with IP32, IP54, conformal coating, castors, lifting arrangements and project-specific cable entry available.

Interfaces and monitoring

Manual front-panel control is standard. RS232C, RS485, GPIB, remote panels and monitoring options can be specified.

Order code example

Example: PXe-330050-A | 3P 415V input | 3P 0-520V output | 50kVA | IP22 | manual control.

Technical specification

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

1. Range and construction		2. Input	
Rated output	0.5-200kVA single-phase; 1-500kVA three-phase	Supply phase	Single-phase or three-phase input, depending on rating and project
Phase arrangements	1P-in/1P-out, 1P-in/3P-out, 3P-in/1P-out or 3P-in/3P-out	Common voltages	110-127V and 220-240V single phase; 200-240V, 380-415V, 440V or 480V three phase
Conversion method	Solid-state AC-DC-AC conversion using IGBT PWM	Input frequency	50Hz or 60Hz, typically +/-5%; 400Hz input optional
Isolation	Integrated output transformer isolation	Input tolerance	Typically +/-10%; 480V configurations normally +/-5%
Construction	Bench, 19-inch rack, trolley or cabinet according to rating	Power factor	Typically >=0.8 standard; >=0.9 options available
Cooling	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	
Output voltage	Single-phase 0-150V or 0-300V; three-phase up to 0-260V L-N / 0-520V L-L	Protection	Over-current, overload, over-voltage, over-temperature and short-circuit protection
Output frequency	Fixed 50, 60, 100 or 200Hz; variable 45-200Hz; optional 40-500Hz	Interfaces	Manual control standard; RS232C, RS485 and GPIB optional
Voltage accuracy	Typically within +/-1% full scale	Display / metering	Voltage, current, frequency, power and power-factor indication
Frequency accuracy	Typically within +/-0.1% full scale	Enclosure	IP22 standard; IP32, IP54 and project-specific formats available
Waveform / THD	Pure sine wave; THD typically <=3% at linear load	Environment	-10C to 55C operation; 10-90% RH non-condensing; altitude typically <=1,800m
Overload / crest	100% continuous; protection above rating; 3:1 current crest factor	Efficiency / reliability	Efficiency typically >=85%; MTBF 50,000 hours
Specification basis		Dimensions and weight	
Values shown are typical for the PXe-A Series. Exact regulation, overload performance, interfaces and environmental limits are confirmed after the connected load and operating range have been reviewed.		Dimensions and weight are issued at quotation stage because rating, phase arrangement, voltage range, enclosure, 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 in the order.	

Options, project support and quotation information

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

Mechanical and enclosure options

IP32 or IP54 construction, conformal coating, 19-inch rack formats, trolley or mobile bases, castors, lifting arrangements, special cable entry and customer-defined terminal layouts.

Control and communication options

RS232C, RS485, GPIB, remote panels, volt-free contacts, remote watchdog monitoring, alarms and automated restart subject to project review.

Electrical configuration options

Alternative input or output voltages, adjustable voltage and frequency ranges, 12-pulse or 18-pulse rectifiers, harmonic mitigation and project-specific protection.

Testing and documentation options

Optional Factory Acceptance Testing, customer-witnessed or third-party witnessed testing, drawings, test records, manuals and Certificate of Conformity.

Project support

FAT

Optional functional and load testing

Witness testing

Customer or third-party attendance

Commissioning

Available for larger and local systems

After-sales

Technical support and application guidance

Information required to prepare a quotation

Supply

Input voltage, phase and frequency

Output

Required phase, voltage range and frequency

Load

kVA, load type, power factor and starting current

Duty

Continuous, cyclic or test operation

Installation

Indoor/outdoor, IP rating, access and mobility

Controls

Manual, remote, communications and interlocks

Lead times, dimensions and weight

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