

**PS SERIES
400 Hz, 7 kVA
FREQUENCY CONVERTER**



**MODEL NUMBER: PS-94-451-1
U.S. PATENT NO. 6,178,101**

INPUT:

Voltage Range	115/200 VRMS \pm 10%
Configuration	3-Phase, wye, grounded neutral
Frequency Range	30 to 800 Hz
Power Factor	\geq 0.98
Input Current Distortion	\leq 5% at nominal input voltage and full rated load
Protection	Over/undervoltage, loss of phase, overcurrent
Phase Rotation	Any

OUTPUT:

Power*	7 kVA continuous
Overload	125% for 5 minutes, 175% for 10 seconds
Voltage**	115/200 VRMS \pm .05%
Configuration***	Three phase
Frequency***	400 Hz \pm 0.1%
Distortion	2% THD maximum
Power Factor Range	0.8 lagging to 0.8 leading (not damaged by any power factor load)
Efficiency	\geq 85% at full load rating
Protection	Over/undervoltage, overload, short circuit

****This product was manufactured in a plant whose quality management system is registered to ISO 9001:2008.**

APPLICATION:

Since its beginning in 1960, Unitron has focused on the design and development of reliable solid-state power systems. The PS Series is the sixth generation in a family of frequency converters, which has seen extensive military and commercial use. The product line is used in research laboratories, production line testing, onboard aircraft and ships, and in many other applications where precise AC power is required. The series is unique in its ability to operate from any standard worldwide power source.

FEATURES:

Low Input Current Distortion • High Input Power Factor • StopLite BITE™ Self-Diagnostic System • Paralleling Option for Power Grid Expansion • High Reliability • Small Size and Light Weight • 36 Month Warranty

DIGITAL MONITORING:

Output Voltage, Current, Frequency, kVA and kW

CONTROLS AND INDICATOR LAMPS:

System Reset Switch, Input Power On/Off Switch, and Input Power ON indicator

MECHANICAL:

Size	17.47" height, 19" width, 25.63" depth
Weight	115 lbs.
Mounting	19" Rack mount
Connectors	Input: MS3102A24-22P Output: MS3102A24-22S
Cooling	Self-contained fans (slow speed for low ambient noise)

ENVIRONMENTAL:

Temperature	MIL-STD-810E, Method 501.3, 502.3 (-25°C to +55°C operating; -40°C to +71°C storage)
Altitude	MIL-STD-810E, Method 500.3 (15,000 ft. operating, 45,000 ft. rapid decompression)
Explosion-Proof Shock	MIL-STD-810E, Method 511.3 MIL-STD-810E, Method 516.4 (10g operational, 20g crash)
Humidity	MIL-STD-810F, Method 507.4
EMI	MIL-STD-461D/MIL-STD-462D

*** Paralleling options available for power grid expansion.**

**** Alternate voltages available, contact factory.**

***** Alternate configurations available, see chart on reverse.**

ADDITIONAL PS-94-451 SERIES CONFIGURATIONS

INPUT FREQUENCY	OUTPUT FREQUENCY (Hz)			OUTPUT VOLTAGE		PARALLEL OPTION	NOTES	MODEL NUMBER
	50	60	400	VOLTS	CONFIG			
30Hz to 800 Hz***			X	115/200	3∅			PS-94-451-1
		X		115/200	3∅			PS-94-451-2
	X			115/200	3∅			PS-94-451-3
			X	115	1∅		3	PS-94-451-4
		X		115	1∅		3	PS-94-451-5
	X			115/230	1∅			PS-94-451-6
			X	115/200	3∅	PG-1	1,4	PS-94-451-7
		X		115/200	3∅	PG-1	1,4	PS-94-451-8
	X			115/200	3∅	PG-1	1,4	PS-94-451-9
			X	115	1∅	PR-1	2,4	PS-94-451-10
		X		115	1∅	PR-1	2,4	PS-94-451-11
	X			115/230	1∅	PR-1	2,4	PS-94-451-12

NOTES:

1. PG-1= Increased Power Grid-Paralleling Option. Unit can be operated with a second identically configured system totaling 20 kVA output rating. Should one system fail in the paralleled configuration, both systems will shut down.
2. PR-1= Redundant Operation-Paralleling Option. Unit will automatically remove any internal power modules from output bus upon their failure, without disturbing the output bus. Unit can also be paralleled with another identically configured system to provide power grid expansion up to 20 kVA. Two systems in parallel provide 1/6 incremental module shedding upon failure without disturbing the bus.
3. Single Phase output operation uses different output connector; contact factory for details.
4. Contact factory for instructions regarding accessory power and parallel control cables used in various configurations.

