

LORAIN® IS 6000
Expandable rack-mounted inverter system





Key Features

- **Modular design** permits expansion of the system in 1kVA increments
- **Modules are hot-pluggable** and can be added or removed without shutting down the system
- **Control circuitry built into each inverter** improves system reliability by eliminating the need for a central controller
- **Systems can be configured up to 5kVA with redundancy**
- **Cabinet is pre-wired for system expansion** as AC load requirements increase
- **Static transfer switch / maintenance bypass panel** available
- **Field flexibility** for DC input

Compact modular design offers easy system expansion and configurations up to 6kVA in 6U.

Product Overview

The LORAIN® IS 6000 provides a pure sine wave 120 VAC, 60 Hertz, 6KVA maximum output from a 48 VDC input, depending on the configuration. The system is composed of 23-in. relay rack-mounted cabinets in 2, 4 and 6 inverter configurations. The DC input to the cabinet can be configured to accept multiple feeds or a single input feed. An optional static switch and maintenance bypass switch combination can be added for ultimate reliability. The system can be configured to cover the range of loads encountered in data centers, wireless sites or central office environments.

The modular design of the LORAIN® IS 6000 permits easy expansion as AC load requirements increase. System configuration can range from as low as 1kVA up to 6kVA max. Each inverter module can be field installed live without system interruption.

An optional 19" or 23", 100 amp, rack-mounted AC distribution panel is available for customers requiring over-current protection on the output.



Application

The LORAIN® IS 6000 rack-mounted Inverter System is ideal for data centers, wireless sites or central office environments where flexible expansion capabilities are necessary.

For additional specification, engineering or installation information, specify model LI48AMCAB, spec. number 584805000 for the system, model LIA102B, spec. number 485501800 for the 1kVA inverter module and model LACP100A specification number 426806600 for the AC distribution panel.



LI48AMCAB, 584805000 Inverter System



1kVA to 6kVA Inverter System Specifications

Input	1000VA LIA102B (485501800)	HDS50 Transfer Switch (486664500)	System (584805000)
Operating Voltage Range	40 to 60 VDC	90 to 150 VAC RMS	40 to 60VDC/95 to 150VAC RMS
Frequency Range	N/A	57.5 to 62.5 Hertz AC In	see STS
Stopping Voltages	39 and 63 VDC	N/A	see inverter
Restart Voltages	46 & 60 VDC	N/A	see inverter
Maximum Input Current	23A @ 800W@ 40VDC	N/A	38A @ 40VDC @ 48W
Inrush Current	<I nom.	N/A	see inverter
Static Transfer Switch	N	Y	optional
Max AC Input Current	N/A	50A	50A
Output			
Nominal Output Voltage	120VAC	120 VAC RMS	see inverter
Maximum Voltage Interruption	N/A	0 to 6 msec (Typical: 3 msec)	see transfer switch
Total Transient Voltage Duration	N/A	1msec to 12 msec (Typical: 5 msec)	see transfer switch
Output Voltage Tolerance	+/-3% adj nom	Depends on source	Depends on source
Output Frequency	60Hz	57.5 to 62.5 Hertz	57.5 to 62.5 Hertz
Total Harmonic Distortion (lin. load)	< 3%	see inverter	see inverter
Nominal Output Power	800W @ unity pf 1000VA @ ≤ 0.8 lag/lead	4800W @ unity pf. (6kVA unit) 6000VA @ ≤ 0.8 lag/lead (6kVA unit)	Depends on the configuration. Available in 2, 4 & 6kVA sizes
Overload (5 sec max)	2000VA	100A	2000VA per inverter
Power Factor for 100% Power	0 to 0.8 lg or ld	see inverter	see inverter
Efficiency	88%	98%	see inverter/STS
Environmental			
Operating Temperature °C	-20 to 50	-20 to 50	-20 to 40
Storage Temperature °C	-40 to 80	-40 to 80	-20 to 80
Safety Compliance	UL1950/EN60950	UL1950/EN60950/UL1778	UL/cUL1950/UL/cUL1778
Dielectric Strength Input/Output	4300VDC	N/A	see inverter
Dielectric Strength Output/Ground	4300VDC	N/A	see inverter
Dielectric Strength Input/Ground	2100VDC	N/A	see inverter
Cooling	Fan	Forced Convection	Forced Convection
General			
Relay Rack Mounting Arrangement	See cabinet	See cabinet	6 inch front projection
Dimensions (H x W x D)	1U x 480 x 350 (mm) 1U x 18.9 x 13.78 (in.)	1U x 316 x 360 (mm) 1U x 12.44 x 14.17 (in.)	2U/4U/6U/8U x 480 x 380 (mm)* 2U/4U/6U/8U x 18.9 x 15 (in.)*
Approx. Weight	6 Kgs / 13.2 lbs.	4 Kgs / 8.8 lbs.	3 - 6 Kgs / 6.6 - 13.2 lbs for 2U 5.5 - 8.5 Kgs / 12.1 - 18.7 lbs for 4U 8 - 11 Kgs / 17.6 - 24.2 lbs for 6U Low value: without HDS High value: with HDS

*If depth of 6-in. front projected equipment exceeds 12 inches, a 1U mounting space above the inverter is required for adequate ventilation.