



AC POWER GROUP

MODULAR INVERTER SOLUTIONS



1.5 kVA LCE Inverter



4.5 kVA Inverter Shelf



Maintenance Bypass Switch



Automatic Transfer Switch



Monitoring / Alarm Panel



Complete 36kVA DC-AC Power System

85 Horsehill Road, Cedar Knolls, NJ 07927

Phone: 973.267.1900 • Fax: 973.267.2047

www.tdipower.com

KEY COMPONENTS

LCE SERIES INVERTER MODULE (LCE-H)



SPECIFICATIONS

Input Voltage:	Nominal 48VDC (38 to 56VDC) or Nominal 24VDC (19 to 30VDC)
Output Voltage:	120 or 220VAC Standard (50 or 60Hz)
Power/kVA:	24VDC/1.0kVA 48VDC/1.5kVA
Surge Rating:	4kVA for 10 Sec.
THD:	<1%
Efficiency:	83% Min. Half Load to Full Load
Operating Temp:	-20° to +55°C

FEATURES

- Hot Bus Plug-In
- Powers any Load from Zero Load to Zero Load
- N+1 Parallel Redundant Operation
- High Demonstrated MTBF (>900,000 Hours)

LCE SERIES INVERTER SHELF (LCES)



SPECIFICATIONS

Input Voltage:	Nominal 48VDC (38 to 56VDC) or Nominal 24VDC (19 to 30VDC)
Output Voltage:	120 or 220VAC Standard (50 or 60Hz)
Power/kVA:	24VDC/3.0kVA fully loaded 48VDC/4.5kVA fully loaded
Dimensions:	19"W x 5.25"H x 19"D

FEATURES

- 19" Rack/Cabinet Mount
- Integrated Shelf to Shelf Bus Bar Connections
- Input Breaker Protected Versions Available
- Standalone Operation

SYSTEM AC & DC MONITORING & DISTRIBUTION (IMAP)



FEATURES

- Local Status Display for Voltage, Current, Fault Indication
- Integrated DC Input & AC Output Terminations
- Mounts Directly with IC Series Systems (19")
- Multiple Standard Lug Configurations
- AC Voltage & Current Monitoring
- DC Voltage & Current Monitoring
- Visual Fault Indications
- Digital Display
- Form 1-C Alarm Contact Outputs

STATIC TRANSFER SWITCH & MAINTENANCE BYPASS (STS)



SPECIFICATIONS

Input Voltage:	120VAC (95-150VAC), 220VAC (180-275VAC)
Input Frequency:	50 or 60Hz
Maximum Output Current:	150A Natural Cooling 180A Forced Cooling
Maximum Voltage Interruption:	60usec to 5msec
Total Transient Voltage Duration:	60usec to 10msec
Temperature:	-20 to 50 degrees C
MTBF:	>400,000 Hours

FEATURES

- Stand-By Applications
- Parallel Inverter Systems with AC Mains
- Selectable Alternate or Primary Source
- Visual Displays
- Remote Communication

MAINTENANCE BYPASS SWITCH (MBPS)



SPECIFICATIONS

Voltage:	120 /220 VAC
Power:	up to 36kW
Current:	400A RMS Steady State
Frequency:	0 or 60Hz +/- 1%
Temperature:	-10 to 50 Degrees C

FEATURES

- Keeps critical AC loads running during system maintenance.
- Seamless power transfer between AC sources.
- Wall mount design for multiple applications.
- Works with any TDI inverter system.
- Field selectable AC voltage.

MODULAR INVERTER SOLUTIONS



4 or 8 shelf configurations using LCE modular inverter

OVERVIEW

Transistor Devices LCE inverter system is designed for modularity and high reliability. With a wide range of standard modules, cabinets, bus bar configurations, shelves and input/output components and modules, the inverter system offers flexibility in design and room for growing power needs. At the heart of the system is the LCE inverter module. The LCE delivers a near perfect sinewave from a variety of DC sources. These low cost, solid state inverters utilize high frequency plus width modulation technology to “synthesize” a precision regulated sinusoidal output with less than 1% Total Harmonic Distortions (THD).

APPLICATIONS

- Backup Power UPS
- Central Office
- Fuel Cell/Alternate Energy
- Wireless Telecom
- Industrial Railway
- Utility Substation

INVERTER CABINET SYSTEM SPECIFICATIONS

Cabinet Series	IC12	IC18	IC24	IC36
Input Voltage	19-30VDC	38-57VDC	19-30VDC	38-57VDC
	Inrush Current Controlled			
Output Voltage	120VAC/60Hz or 220VAC/50Hz	120VAC/60Hz or 220VAC/50Hz	1120VAC/60Hz or 220VAC/50Hz	120VAC/60Hz or 220VAC/50Hz
DC Content for 120VAC Output	10mV Max.	10mV Max.	10mV Max.	10mV Max.
	No Preload Requirement			
DC Content for 220VAC Output	20mV Max.	20mV Max.	20mV Max.	20mV Max.
	No Preload Requirement			
Power Rating	12kVA/12kW	18kVA/18kW	24kVA/24kW	36kVA/36kW

Output

Waveform: Sinusoidal

THD: <1% Typical

Voltage: 120VAC/60Hz or 220VAC/50Hz

Frequency: better than 0.01% stability

Fully Isolated: Input to Output

DC Content: 10mV max for 120VAC output
20mV max for 220VAC output
No Preload required

Peak Output Current into Nonlinear Load:

36Apk Max. for 120VAC per Module

18Apk Max. for 220VAC per Module

OUTPUT POWER FACTOR:

Linear – Powers all loads with 0 leading to 0 lagging PF.

Nonlinear – Powers rectified loads with up to 2.8 Crest Factor at full load.

MOTOR STARTING

4kVA Output for 10 sec. Minimum per Module, 48kVA

Output for 10sec. Minimum at system level.

EFFICIENCY

Efficiency: 82% Min. Half Load to Full Load

Standby Dissipation: Under 1200 Watts No Load

PROTECTION

Input Undervoltage

Input Overvoltage

Output Overload

Output Short Circuit

ENVIRONMENTAL

Cooling: Convection

Operating Temp: -20°C to +55°C

Storage Temp: -50°C to +85°C

Humidity: 0-100% non-condensing

Safety Agency: pending

Reliability

MTBF: >750,000 hours per module (Demonstrated)

Mechanical

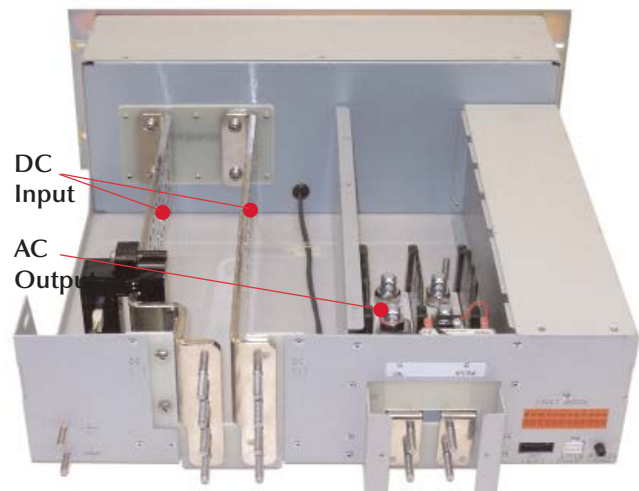
Terminations: Integral AC Terminal Block and DC Bus for standard Lugs

Weight: Estimated at 350Lbs.

Size: 19.09"(23.09)W x 19.09"(23.09)D x 56.62"(58.78)H
Outside Diameters in parentheses

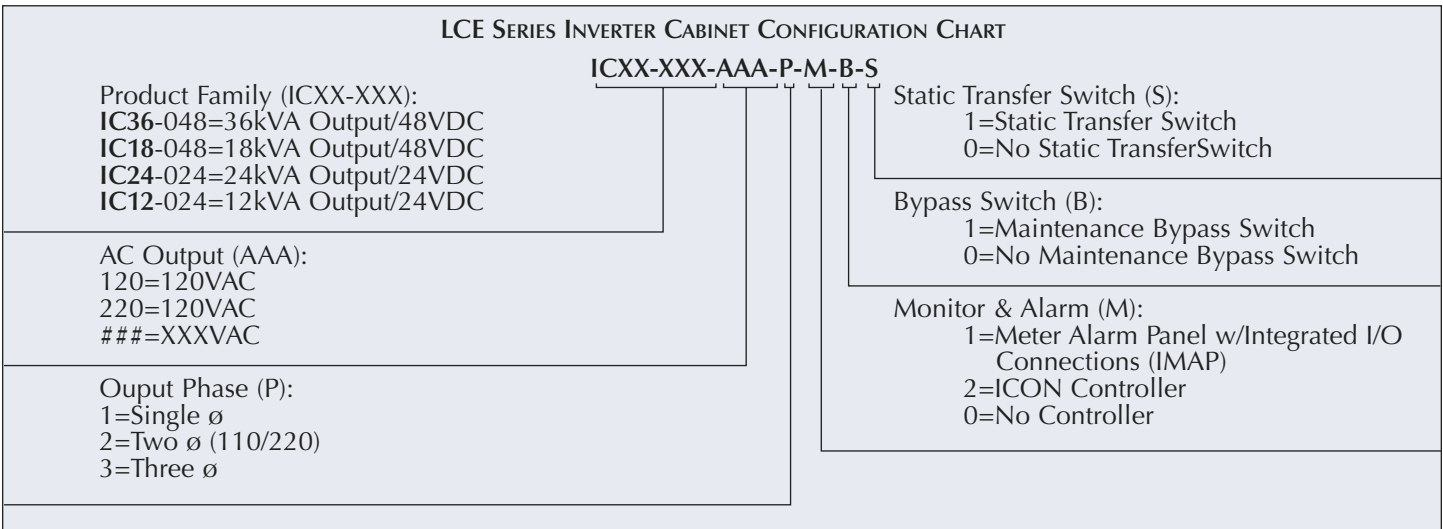


Integrated System
Bussing & Alarm Connections



Convenient Input / Output
Terminations

BUILD THE SYSTEM YOU NEED

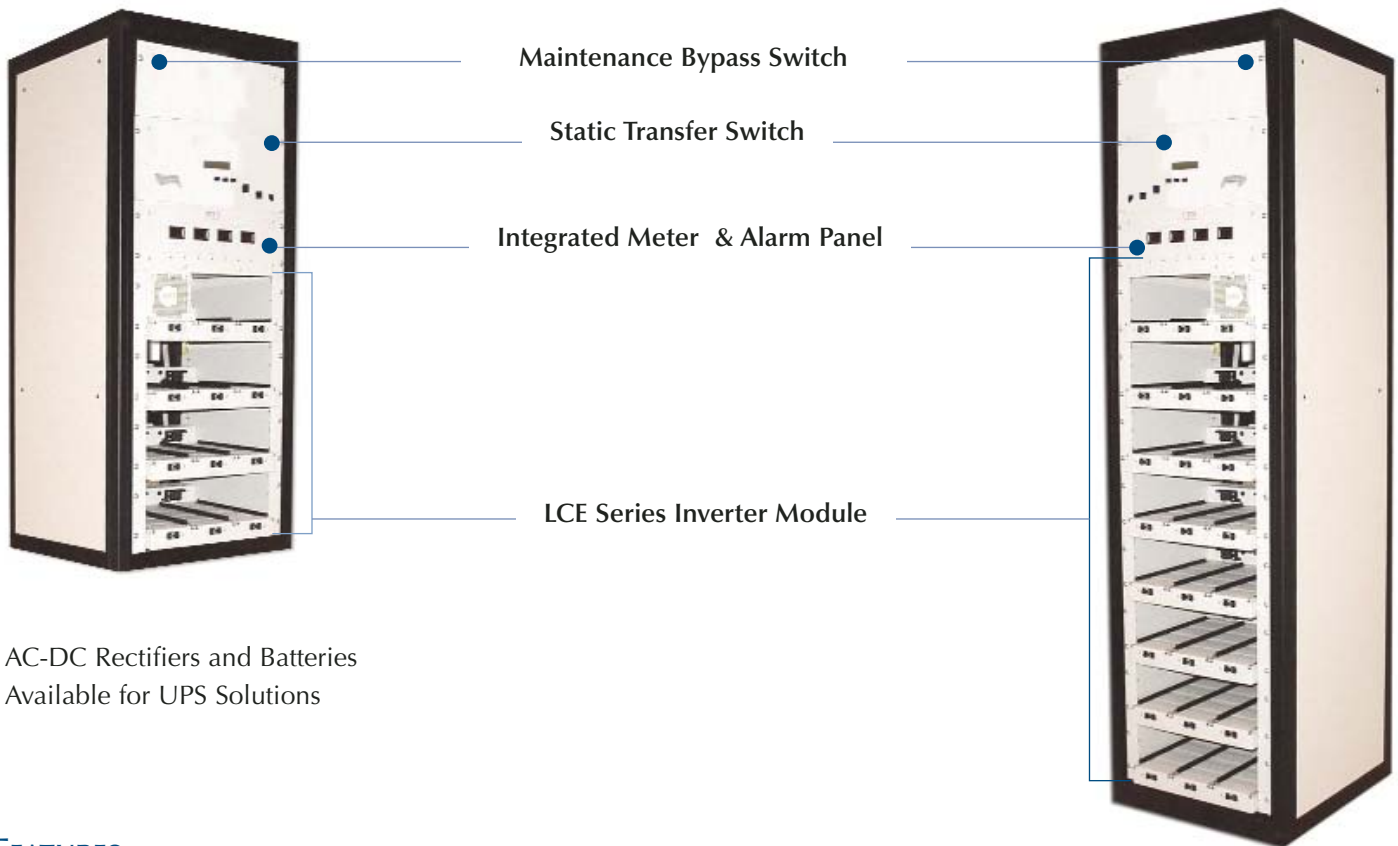


IC12-12kVA systems/ IC18-18kVA Systems

- Scalable from 1.0 kVA to 18kVA

IC24-24kVA systems/ IC136-136VA Systems

- Scalable from 1.0 kVA to 36kVA



* AC-DC Rectifiers and Batteries
 Available for UPS Solutions

FEATURES

- Hot Bus Plug-In Modules
- Breaker Protected Shelves Available
- Standard OTS Configurations
- Failsafe-No Single Point Failure
- Metering and Alarm Panel with Integral Input/Output
- Remote Communication Options
- Powers Any Loads
- Static Switch Available
- High Reliability
- Single or Three Phase
- Custom input & Output Voltages
- True Redundant Design
- Full Power from -20 to +55°C
- Fully Scalable

TDI AROUND THE WORLD



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