



# FORZA SINGLE PHASE INVERTER

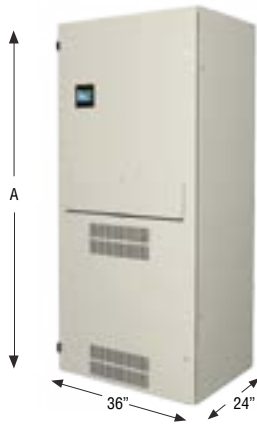
Distributed by BeLuce

Project Name: \_\_\_\_\_

Model Number: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Date: \_\_\_\_\_



1.5 - 7 kW

UL 924 Listed / C-UL  
Listed to CSA C22.2  
No. 141-15

UL 1778 Listed /  
C-UL Listed to CSA  
C22.2 No. 107.1-01



7.5 - 14 kW

Output Rating	Inverter (A)
1.5kW - 3.5 kW	72"
4.2kW - 7 kW	80"

Output Rating	Inverter (B)	Battery (C)
7.5kW - 10 kW	36" W x 24"D	29" W x 24"D
12.5kW - 14 kW		36" W x 27"D

## ORDERING GUIDE

FZA - - - - -

SERIES	INPUT	OUTPUT	FREQUENCY	OUTPUT (KVA/KW)		MONITOR	*BATTERY	OFF BUS	OPTIONS
FZA	A <sup>1</sup> = 120	A = 120	X (60Hz)	1.5 kW	7 kW	1 (Intellistat)	C (30 min)	0 = None	EB (External Bypass, input/output voltage must match and output breakers are limited to (1) only)
	J = 277	J = 277		2.2 kW	7.5 kW	2 (Instllistat with-)	D (60 min)	1 = Off Bus	
	L <sup>4</sup> = 208/120	Y = 277/120		3 kW	8 kW	TCP/IP	S (90 min)	T = Timed	
	G <sup>4</sup> = 240/120	L <sup>4</sup> = 208/120		3.5 kW	8.5 kW	MODBUS TCP	E (120 min)	Off Bus	
	V <sup>2</sup> = 347	G <sup>4</sup> = 240/120		4.2 kW	10 kW	MODBUS RS485	N (Other)		CB <sup>3</sup> (Output distribution circuit breakers)
	D = 480	V = 347/120		5 kW	12.5 kW	BACnet/IP			
	E = 600			6 kW	13.5 kW	BACnet MS/TP			
					14 kW				

NOTE<sup>1</sup>: 120V input maximum 5kW; NOTE<sup>2</sup>: 347V input starts at 4.2kW; NOTE<sup>3</sup>: Refer to the options section to determine quantity of breakers; NOTE<sup>4</sup>: 208/120V and 240/120V starts at 3kW



# FORZA SINGLE PHASE INVERTER

## EMERGENCY UPS INVERTER

Providing a seamless transfer to back-up power for your emergency lighting system, the **FORZA** is compatible with all fixtures including LED, HID, metal halide, high-pressure sodium, quartz / mercury vapor, halogen, fluorescent, and incandescent lighting applications.

## SAFETY

- cUL listed to CSA C22.2 No. 141-15 Emergency Lighting Equipment
- cUL listed to CSA standard C22.2 No. 107.1-01
- General Use Power Supplies
- UL 924 listed Emergency Lighting Equipment
- UL 924 listed Auxiliary Lighting and Power Equipment
- UL 1778 listed Uninterruptible Power Supplies
- NFPA 101, NFPA 111, NEC, and local codes

## STANDARDS

- ANSI / IEEE C62.41 Category B3
- NFPA 101 7.9.3.1.3
- NFPA 111 Stored Electrical Energy Emergency and Standby Power Systems. Meets SEPSS / ECE / Level 1 and Level 2 criteria for types O, U, A, B, and 10; and Classes up to and including Class 1.5
- NFPA 70 National Electric Code
- FCC Class A limits, 47 C.F.R. Part 15, Subparts A, B
- IEEE 519

## INTERNAL SPECIFICATIONS

- Input Operating Voltage Range: +12%, -30% typical, load-dependent without battery usage
- Input Frequency: 60 Hz,  $\pm 2.5\%$
- Input Current Harmonic Distortion: <5% THD
- Input Power Factor Correction: > .99 PF
- Output Regulation: Typically better than  $\pm 1.5\%$
- Overload Rating: Up to 125% for 30 cycles, 150% for 4 cycles when fed from the AC power source, or on battery (without use of static bypass).
- LED Inrush Rating: Peak overload capability up to 1400% to accommodate inrush current from LED fixtures/drivers (without use of static bypass).
- Standard Unit Operating Temperature: 20° C to 30° C

## FEATURES & BENEFITS

- Uninterrupted, regulated, continuous sinewave output for use with “normally on” lighting fixtures and exit lamps, LED and HID compatible.
- Standby output for use with “normally off” emergency lighting fixtures.
- Pulse width modulation and IGBT technology provide tight output voltage regulation.
- Delivers highly-filtered, regulated, and spike-free power to emergency lighting fixtures and “Life Safety” devices.
- True, online double-conversion topology provides conditioned, regulated power and 100% reliability to emergency lighting loads
- Auxiliary input command.
- High-speed static bypass, as well as a maintenance bypass.
- System approved for 42k AIC rated source.
- Variable-range logic provides added security during deep brownout conditions, without battery consumption — thus assuring that the batteries will be at full capacity for a power outage.
- Field-modifiable distribution.
- Short-circuit protected.
- NEMA 1 enclosure.
- Generator-compatible.
- 4-stage, temperature compensating smart charge.
- Optional control device override (wall switch, occupancy sensor, dimmer, etc).
- Optional zone sensing.
- Optional remote status panel and automatic phone dialer.
- Optional network connectivity.
- Seismic Rated Models Available
- Meets CBC 2016 & IC 2015

## APPLICATIONS

- Schools / Universities / Residences
- Security / Public Address Systems
- Arenas / Stadiums
- Subways / Mass Transit
- Parking Structures / Garages
- Hospitals / Clinics
- Office Buildings
- Shopping Malls
- Airport Terminals
- Casinos / Resorts
- Hotels / Motels
- Apartment Buildings
- Correctional Facilities

# FORZA SINGLE PHASE INVERTER

## ADVANCED DIGITAL MONITORING THE INTELLISTAT TS™

The user-friendly Intellistat TS™ monitor provides quick, full access to all of the inverter's features, allows all programming to be done directly from the touchscreen display, and provides complete system diagnostics and testing. A colour, TFT, high resolution touch-screen display indicates all the electrical parameters, as well as the functional status of the inverter. The touch-screen display allows the entry of the date / time values, system setpoints, and password information into the monitor, without the need for an external computer and cable.

The Intellistat TS's features include:

- LCD display of all electrical parameters.
- NFPA-compliant automatic battery testing / logging.
- User-programmable automatic system testing.
- System alarm annunciation.
- Audible alarm with alarm silence.
- Alarm status display.
- Programmable alarm set-points.
- Date and time display.
- Auto-logging of test results and abnormal events.
- Multi-layer password protection.
- Programmable local interfaces.
- Logs up to 50 events.
- Non-volatile clock and memory.
- Remote monitoring capabilities.
- Optional reporting of test results via fax / e-mail / voice / webpage.
- Optional status notification via e-mail / cell-phone.
- The INT display will now also provide all BAS (Building Automation System) remote network signals - like Ethernet, SNMP, Modbus, RS485, BACnet, etc.
- The INT display on the door has the various connection ports.

## MONITORED PARAMETERS

The Intellistat TS monitors the following parameters and inverter status indicators:

- Input voltage.
- Output voltage.
- Output current.
- Output VA.
- Output watts.
- Output power factor.
- Output percent load.
- Output frequency.
- Battery voltage.
- Battery charger current
- Percent battery time remaining.

## ALARMS & STATUS

The Intellistat TS announces many alarms, including the following:

- High / low input voltage.
- High / low output voltage.
- High output VA (overload).
- Low output VA.
- High / low output frequency.
- High / low battery voltage.
- High battery charger current.
- System normal.
- General alarm.
- System on battery.
- Low battery warning.
- Low battery shutdown.
- Battery test in progress.
- Auto battery test failed / passed.
- Off bus status.
- DC charger fail / DC open.
- Output circuit breaker open.
- REPO shutdown.
- System in static bypass.
- System in manual bypass.

## AUTOMATIC SYSTEM TESTS

The Intellistat TS™ automatically performs a userdefined (date and time) 5-minute system test every 30 or 90 days. It also performs user-defined (date and time) 30-, 60-, or 90-minute, or 2- or 4-hour annual system tests. For all of these tests, the Intellistat TS logs the test results with date and time, as well as a "pass" or "fail" indication.

## MANUAL SYSTEM TESTS

The Intellistat TS also allows the user to manually invoke a userdefined system test for 30-, 60-, or 90-minutes, as well as 2- or 4-hours. A 1-minute or 5-minute manual test is also available for "spot inspections".



# FORZA SINGLE PHASE INVERTER

## FORZA AVAILABLE OPTIONS:

### NORMALLY OFF BUS

Provides standby power to “normally off” emergency lamps at the same or different voltage than “normally on” emergency lamps. When utility power is lost or voltage is inadequate, emergency power is supplied to “normally off” lights, providing a safe means of egress.

### TIMED NORMALLY OFF BUS

Functions the same as the Normally Off Bus (above), but differs in that the “Transfer ON” and “Return OFF” times for the bus are programmable. This programmable feature is especially useful to prevent nuisance activation of emergency lighting during short term power disturbances. Additionally, the return delay provides sufficient time for standard HID lighting recovery, factory-set at 15 minutes.

### AUTOMATIC PHONE DIALER

Plugs into the communications port of the inverter and can be programmed to notify personnel of alarm conditions. This small device can dial up to four (4) phone numbers (land, cell, pager); and records and delivers a custom voice message.

### OUTPUT DISTRIBUTION CIRCUIT BREAKERS

Meeting the need for flexible power distribution, circuit breakers can be added, subtracted, or moved without any complex mounting techniques. Output circuit breakers can be configured to supply power to different lighting loads at different voltages. Front-access to the standard input breaker and the optional output distribution circuit breakers is through a lockable drop-down panel door.

### OPTIONAL OUTPUT DISTRIBUTION

Output Circuit Breaker Pole Spaces Available:  
 With Trip Indicator Alarm / Light: 13 monitored (120V, 277V)  
 10 monitored (347V) Output circuit breakers cannot be used with external bypass.

### BATTERY WARRANTY

1 full year from date of purchase and 14 year prorated.

