

New product

ELFTM Single Phase Series

Uninterruptible emergency lighting, 1PH, inverter system 1000VA – 2800VA



Features

- 98% efficient at full load
- PWM/IGBT technology
- Self-testing/self-diagnostic
- User programmable with password protection
- Standard input circuit breaker
- Standard output circuit breaker
- Micro-processor controlled
- Floor or wall mountable
- 30 min. standard run time
- 2ms transfer time
- Compatible with all lighting loads LED and HID
- Automatic event, test and alarm log
- Small footprint (stackable cabinets)
- Maintenance-free standard batteries
- Forced air cooling during emergency mode only
- CSA C22.2 No. 141-15. Meets NFPA101



ELFTM Series 30 minute run time

Partial model number	Power rating (kW) 30 min.	Voltage in-out VAC	Cabinet dimensions (cm)				Batteries		Total system weight (kg)	Total no. of cabinets
			W (cm)	H (cm)	D (cm)	Weight (kg)	No. of batteries	Weight (kg)		
1	1.00	120 or 277	62	70	27	55	4	42	97	1
		347		110		90		132	1	
2	1.60	120 or 277	62	110	27	75	6	63	138	1
		347		140		108		171	1	
3	2.20	120 or 277	62	110	27	78	8	84	162	1
		347		140		108		192	1	
4	2.80	120 or 277	62	140	27	92	10	105	197	1
		347		180		127		233	1	

ELFTM Series 60, 90 & 120 minute run time

Partial model number	Power rating (kW)			Voltage in-out VAC	Cabinet dimensions (cm) ¹				Batteries		Total system weight (kg)	Total no. of cabinets
	60 min.	90 min.	120 min.		W (cm)	H (cm)	D (cm)	Weight (kg)	No. of batteries	Weight (kg)		
1	1.00	0.90	0.80	120 or 277	62	70	26.67	55	4	66	121	1
				347				110		90	156	1
2	1.60	1.44	1.28	120 or 277	62	110	26.67	75	6	99	174	1
				347				140		108	207	1
3	2.20	1.98	1.76	120 or 277	62	110	26.67	78	8	132	210	1
				347				140		108	240	1
4	2.80	2.52	2.24	120 or 277	62	140	26.67	92	10	165	257	1
				347				180		127	293	1

¹The cabinet dimensions above include the side cabinet

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System specifications

System specifications

General	
Design	Stand-by no break. PWM inverter type utilizing IGBT technology with 2ms transfer time
Control	Microprocessor controlled, 4 x 20-character display with touch pad controls & functions Continuous scrolling display of system status and faults, with alarm feature
Metering	Input and output voltage, battery voltage, battery and output current, output VA, temperature, inverter wattage
Communications	Optional RS-232 port (DB9)

Electrical input

Voltage	120, 277 or 347VAC, 1-phase 2-wire, +10%/ -10%. Contact factory for all other voltages
Input power walk-in	Limiting inrush current to less than 125%, 10 time for 1 line cycle for incandescent loads
Input frequency	60Hz, +/-3Hz
Protection	Standard input circuit breaker
Harmonic distortion	<10%
Power factor	0.5 lag/lead

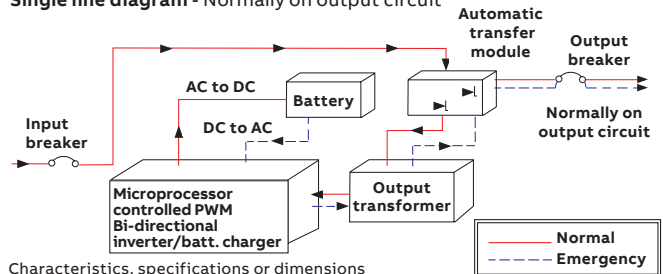
Electrical output

Voltage	120, 277 or 347VAC, 1-phase 2-wire Contact factory for all other voltages
Static voltage	Load current change +/-2%, battery discharge +/-12.5%
Dynamic voltage	+/-3% @ 25% load step change and +/-6% @50% load step change +/-3% for a 50% load step change, recovery within 3 cycles
Harmonic distortion	<3% THD for linear load
Output frequency	60Hz +/- 0.05Hz during emergency mode
Load power factor	0.5 lag to 0.5 lead
Overload capability	115% for 10 minutes, 150% for 16 cycles
Protection	Optional distribution circuit breaker
Crest factor	2.8

Environmental conditions

Storage/transport	<ul style="list-style-type: none"> -4°F to 158°F (-20°C to 70°C) without batteries -0°F to 104°F (-18°C to 40°C) with batteries max. 3 months at 104° F (40° C)
Operating temperature	System operates safely from 32°F to 104°F (0°C to 40°C) UL924 listed to provided 30, 60, 90 and 120 mins of battery back up between 68° F and 86°F (20°C to 30°C). Battery performance can be affected by temperature
Altitude	<10,000 feet (above sea level) without de-rating
Relative humidity	0 to 95% non-condensing
Audible noise	50 dBA at 1m from surface in emergency mode

Single line diagram - Normally on output circuit



Characteristics, specifications or dimensions subject to change without notice.

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System specifications and ordering information

Cabinets

Single freestanding or wall mount NEMA Type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design. Top and left side conduit entry with knockouts.

Inverter

Using IGBT/PWM technology the inverter converts the DC voltage supplied by the batteries to AC voltage of a precise stabilized amplitude and frequency, suitable for most sophisticated electrical equipment. True sinusoidal output waveform with very low distortion (less than 3% for linear loads). Overload capability of up to 150% for 16 line cycles.

Charger

Fully automatic, temperature compensated, microprocessor controlled charger recharges fully discharged batteries in maximum 24 hours at nominal AC input voltage. AC input current limiting and over-voltage protection included.

Battery

System is provided with 10 year, maintenance free, sealed valve regulated lead calcium batteries. 30 min. standard discharge time at full load under normal operating temperature. Low voltage disconnect protection included. No special ventilation required.

Self-diagnostic

Automatic self-test consists of a 5-minute monthly and full run time annual function. The front-mounted control panel includes a 4-line 20-character display, a keypad to control and monitor the internal operation of the system. This allows the operator to easily "watch"

system functions as they occur and check on virtually any aspect of the system's operation. Self-diagnostic function monitors, controls, generates alarms and memorizes events.

Alarms

High/low battery charger voltage, high/low AC input voltage, near low battery, low battery, load reduction fault, output overload, high ambient temperature, inverter fault, output fault, optional output circuit breaker trip, charger fault, output overload shutdown.

Optional features

Normally off output, output circuit breakers, output trip alarm, RS232 communication port, remote meter panel, remote summary alarm panel, summary alarm dry form C contact, inverter on dry contacts, variable time delay, bypass relays, wall mount bracket, circuit breaker lock, drip top (NEMA 2), internal/external maintenance bypass switch, output transfer delay, serial to ethernet adapter, battery strapping, zone monitoring, floor mount bracket, BACnet MSTP, Modbus RTU.

Factory start-up

Includes one additional year of warranty. See warranty conditions

Warranty (full limited warranty conditions available upon request)

Limited manufacturer warranty is one-year, parts and labor, for system electronics or two-year with factory start-up program. Battery warranty is one year full plus 9 years pro-rata for a total of 10 years, under normal operating conditions. System must be put in service within 180 days from ship date in order to validate warranty.

How to order

Input/output voltage	Series	Nominal capacity	Battery type	Emergency run time	Output breaker configuration	Output breaker voltage	Output breaker amperage	Output breaker qty.
1= 120-120	ELFTM	1= 1000VA	S= Standard	R30= 30 min.	B= Normally ON N= Normally OFF ²	A= 120	10= 10 Amp 16= 16 Amp 20= 20 Amp 25= 25 Amp 32= 32 Amp	01-10= Choose the number of output breakers between 01 and 10 ³
2= 120-120/277 ¹		2= 1600VA		R60= 60 min.		B= 208		
3= 208-120 ¹		3= 2200VA		R90= 90 min.		C= 240		
4= 240-120/240 ¹		4= 2800VA		R120= 120 min.		D= 277		
5= 277-120 ¹						Z= Other		
6= 277-277								
7= 277-277/120 ¹								
8= 208-120/240 ¹								
9= 208-120/208 ¹								
10= 347-347 ¹								

¹Enclosure height will increase. Contact factory.

²Normally off loads cannot exceed 20% of total KVA rating with any combination of HID loads

Options	Monitoring	Mounting	Warranty (one year standard)	Accessories
A= Remote summary alarm panel	BAC= BACnet communication	Blank= Standard wall	2YW= Start up & same day training	Blank= No accessories
BL= Circuit breaker lock(s)	(MSTP)	F= Floor mount bracket	5YP= 5-year preventative maintenance plan (startup included)	EMBP= External maintenance bypass switch ⁴
C= Status monitoring dry form C contacts alarm panel	MOD= Modbus RTU	(adds 4" to total system height)	5YW= 5-year extended electronics warranty	SPARES= Spare fuses & circuit boards
D= Drip top (NEMA 2)		W= Wall mount Brackets	SMP= Service monitoring plan	SPAREF= Spare fuse kit
I= Inverter on dry form C contact		Z= Seismic/raised floor (adds 4" to total system height)		
L= Load control relay (contact factory for load control applications)				
M= Maintenance bypass (MBB)				
M(BBM)= Internal maintenance bypass				
O= Output transfer delay(factory set at 3 seconds adjustable 0 to 7.5 seconds)				
P= Remote status panel (requires "C" option – status monitoring dry form C contacts alarm panel)				
S= Summary fault form C contacts				
SEA= Serial to ethernet adapter				
T= Output trip (supervised) alarm ²				
V= Time delay 15 minutes (15 minute retransfer time delay of normally off circuit after return of utility)				
Y= Battery strapping				
ZM= Zone monitoring (quantity must be specified)				

⁴Cannot be purchased with internal output breaker option

Example: 1ELFTMSR30BA162BLBAC

³Unless output circuit breakers are specified, a single output breaker will be supplied with each unit and the current rating will vary based on the output power and voltage rating of the unit. Maximum specified output breakers available: 10 unsupervised (1-pole), 6 supervised (1-pole). A 2-pole breaker occupies 2 positions.