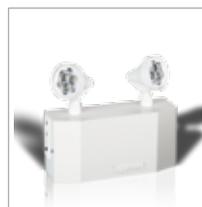


 **EMERGI-LITE®**



A complete range of **Specification Grade  
Emergency Lighting** Products and Accessories



ON THE PROJECT, ON THE SHELF, ON THE JOB

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spec grade

INDUSTRIAL















































































# DISTRIBUTOR SELECT

## Table of Contents

					
Prestige™ Thin Series P. 90	Total™ Edge-Lit Series P. 91	EL-2LED Series P. 92	ELXN400LED Series P. 93	EF43D & EF44D Series P. 93	EL-2SQ Series P. 94
					
ELX400 SQ Series P. 95	EL-2MRS Series P. 96	12EL50-2MRS Series P. 97	ELX-MRS Series P. 98	ELX Series P. 99	DLM-2 Series P. 100
					
GS Series P. 101					















TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



# 12EL50-2MRS Series

Completely Self-Contained or Heavy Duty Thermoplastic Battery Unit

## Features

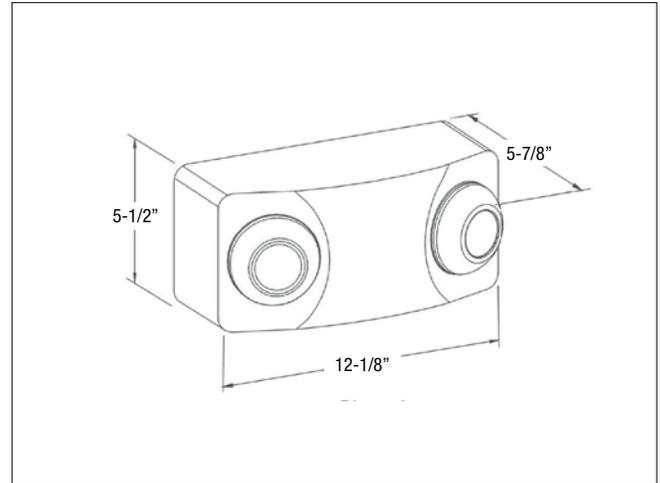
- Each self-contained unit comes with two (2) 6V MR16 halogen or LED lamps housed in adjustable, gimbal-type assemblies to provide clean, adequate lighting
- High impact thermoplastic construction is UL recognized 94, 5VA
- Sealed, maintenance-free Lead-Calcium batteries
- Reliable integrated circuitry offers 120/277VAC 0.1/0.05A input standard, automatic charging, instantaneous transfer, test switch, long-life LED AC charge monitor, temperature compensated charger, short circuit protection, low battery voltage disconnect, brownout protection, and lock out (automatic battery detection during installation)
- Snap-together thermoplastic housing facilitates mounting in any orientation
- UL924 Listed
- Damp location listing is standard
- 3-year limited warranty  
 Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

## Accessories

DESCRIPTION	PART NUMBER
Wire Guard	WG13-E
Replacement MR16 lamp 12V-4W LED	580.0093-E
Replacement MR16 lamp 12V-12W Halogen	580.0080-E
Replacement MR16 lamp 12V-20W Halogen	580.0064-E

## Dimensions

Dimensions are approximate and subject to change.



## Power Consumption

Series	Battery Type	DC Voltage	Watts to 87-1/2% of rated battery voltage				Dual Voltage	Current Maximum	Maximum
			1-1/2 hrs	2 hrs	3 hrs	4 hrs			
12EL50-2MRS	Lead-Calcium	12V	50	32	25	16	120VAC 277VAC	.21A .1A	23W 23W

## How to Order

VOLTAGE	SERIES	CAPACITY (W)	LAMP
12= 12 Volts	EL	50	-2MRS-MK= 12V-12W Halogen (Standard) -2MRS-LG= 12V-4W, MR16 LED -2MRS-MG= 12V-20W Halogen

Example: 12EL50-2MRS-MK



TYPE:	_____
CATALOG #:	_____
NOTES:	_____

## ELX-MRS Series

### Thermoplastic Exit Sign and Combination Unit

#### Features

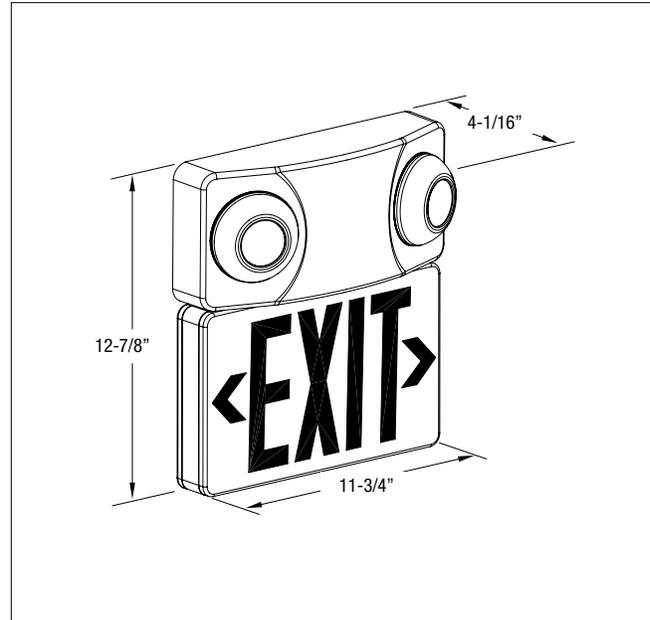
- Rugged off-white thermoplastic construction
- Even illumination for excellent legibility
- Snap-together design for quick and easy installation
- Universal mounting, complete with 2 faces, backplate, and canopy
- Replaceable knockout directional chevrons
- Energy efficient, long-life red or green LEDs
- 6 volt, sealed, maintenance-free Lead-Calcium battery
- Fully adjustable, glare-free, 6 volt MR16 lamps
- 4W LED lamps available
- UL924 Listed
- Damp location listing is standard on all models
- 3-year limited warranty  
Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

#### Charger

- 120/277VAC input
- Fully automatic charger
- Temperature compensated
- Brownout protection
- Short circuit protected
- Low voltage battery disconnect
- Push to test switch
- AC pilot light

#### Dimensions

Dimensions are approximate and subject to change.



#### Accessories (order as a separate item)

DESCRIPTION	SUFFIX
Replacement MR16 lamp 6V-5W	580.0072-E
Wire Guard Wall Mount	WG6-E

#### Power Consumption

DESCRIPTION
120/277VAC, 60Hz 0.11/0.05A

#### How to Order

SERIES	STENCIL FACE	LIGHT HEADS
ELXN400	R= Red G= Green	-2MRSN= 6V-5W MR16 -2MRSN-LA= 6V-4W, LED MR16

Example: ELXN400R-2MRSN

TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



## ELX Series

### Economical, Thermoplastic LED Exit Signs

#### Features

- Rugged off-white thermoplastic construction
  - Even illumination for excellent legibility
  - Snap-together design for quick and easy installation
  - Universal mounting, complete with 2 faces, backplate, and canopy
  - Replaceable knockout directional chevrons
  - Energy efficient, long-life red or green LEDs
  - UL924 Listed
  - Damp location listing is standard on all models
  - 3-year limited warranty
- Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

#### ELX Series Models

- AC-only exit signs, red or green
- Self-powered exit signs, red or green

#### Self-Powered Emergency Models

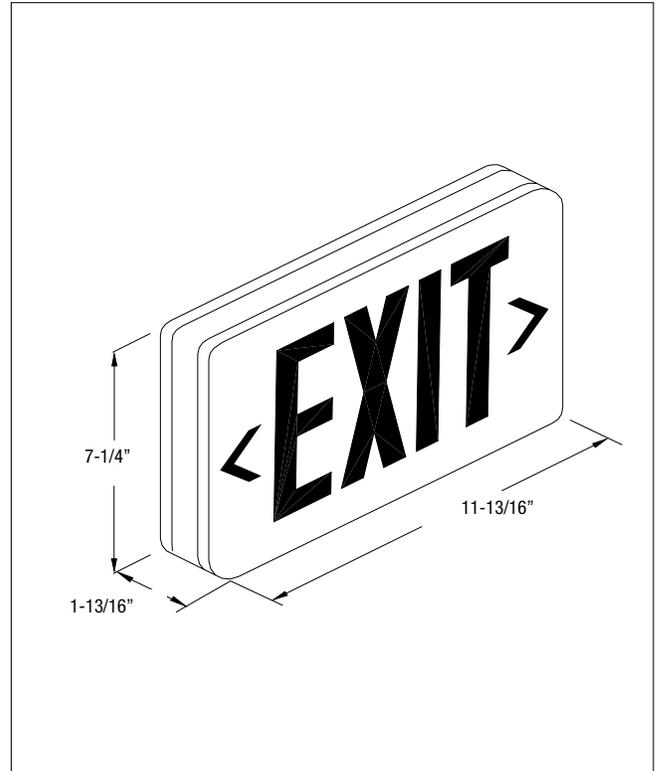
- Replaceable, sealed Nickel-Cadmium battery
- Provides a minimum 90 minutes of continuous emergency illumination
- Energy star compliant
- Batteries recharge per UL924 specifications
- Consumes less than 3W
- Optional: Advanced Diagnostic

#### Charger

- 120/277VAC input
- Fully automatic
- Temperature compensated
- Brownout protection
- Short circuit protected
- Low voltage battery disconnect
- Push to test switch
- AC pilot light

#### Dimensions

Dimensions are approximate and subject to change.



#### Accessories (order as a separate item)

DESCRIPTION	SUFFIX
Wire Guard - Wall Mount	WG1-E
Ceiling or end mount	WG5-E

#### Power Consumption

DESCRIPTION
120/277VAC, 60Hz maximum 2.5W

#### How to Order

SERIES	LEGEND COLOR	OPTION
ELX400= AC-only ELXN400= Self-Powered	RN= Red GN= Green	-AD= Advanced Diagnostic*
		*Available only with Self-Powered model, no remote capacity

Example: ELXN400RN



TYPE:	_____
CATALOG #:	_____
NOTES:	_____

## DLM-2 Series

### Thermoplastic Housing 6V-12W Capacity Lead-Calcium Battery Unit

#### Standard Features

- Each self-contained unit comes with two (2) 6V high intensity glass wedge based incandescent lamps.
- Constructed of high-impact UL recognized 94V 5VA thermoplastic. Resists denting, peeling, scratching and corrosion. Transparent polycarbonate lens.
- Sealed, maintenance-free Lead-Calcium batteries.
- Integrated circuitry offers 120/277VAC 0.08/0.04A standard, automatic charging, instantaneous transfer, test switch, long life LED AC charge monitor light, temperature compensated charger, short-circuit proof and reverse polarity protected. Low battery voltage disconnect, brownout protection, and lockout (automatic battery connection).
- Can be mounted in any orientation on walls or ceilings. No screws or other mounting hardware is visible.
- UL924 Listed
- Damp location standard
- 3-year limited warranty  
Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

#### Accessories (order as a separate item)

DESCRIPTION	PART NUMBER
Wire Guard	WG3-E

#### Power Consumption/Unit Rating

Series	Battery Type	DC Voltage	Watts to 87-1/2% of rated battery voltage*				Units Dual Voltage*	Current Maximum
			1-1/2 hrs	2 hrs	3 hrs	4 hrs		
DLM-2	Lead-Calcium	6V	12	-	-	-	120VAC 277VAC	08A .04A

\* Stand-by power consumption is 50% lower for Lead-Calcium batteries.

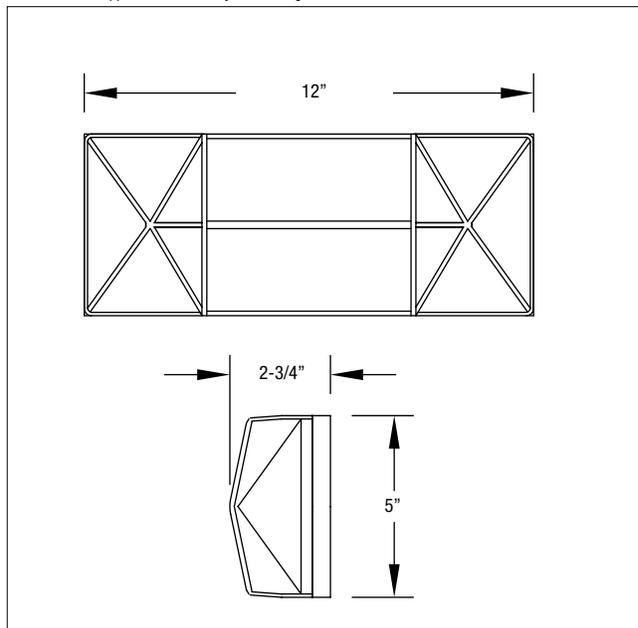
#### How to Order

SERIES
DLM-2= DLM-2 Battery-Powered Emergency Lighting

Example: DLM-2

#### Dimensions

Dimensions are approximate and subject to change.

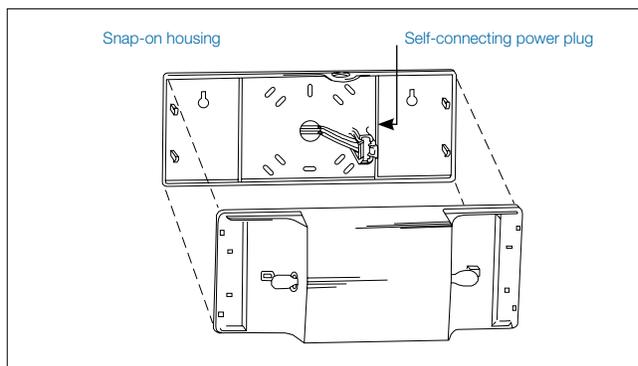


#### Performance

In both mechanical and electrical performance, the **DLM-2** is a superior value in its class.

Its tough thermoplastic body and flush mounted heads will not dent, peel or corrode. The snap-together lens and body and self-connecting power plug make installation quick and easy.

Electrical performance is assured by a 6 volt maintenance-free Lead-Calcium battery and a solid state charger with premium features such as: lockout, Temperature compensation, and low voltage disconnect. Selectable 120/277 standard operation.



TYPE: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

NOTES: \_\_\_\_\_



## GS Series 6 Volt Recessed Down Light



### Standard Features

- An adjustable gimbal directs the light from one (1) 6V wedge-base PAR 36 lamp head
- The low-profile trim ring is molded in tough polycarbonate with a semi-gloss white finish to complement a variety of ceilings. The fully-recessed back box is constructed of 20-gauge steel
- Available with Lead-Calcium batteries
- PulsePlus Charger circuitry offers 120/277VAC 60 Hz., 0.3/0.15 Amp, fused output circuit(s), long life LED pilot indicator, temperature compensated, sealed relay, low voltage battery disconnect, brownout protection and lock out (automatic battery connect)
- Inconspicuously mounted and easily accessed. The test switch and LED pilot light are located on the side of the lamp ring on the standard unit
- A slide-out chassis and two quick-connect plugs make installation and servicing easy. Adjustable bar hangers included
- UL924 Listed
- 3-year limited warranty  
Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

### Accessories (order as separate item)

DESCRIPTION	SUFFIX
Remote Test Switch (metal face plate)	RTS
Remote Test Switch (plastic face plate)	RTS-1

### Unit Rating

The GSM10 unit is furnished with one 6V-10W wedge-base lamp. Other wattages available, see lamp data sheet for selection of PAR lamps.

Sealed Maintenance-Free Battery Types	D.C. Voltage	Model Number	Watts to 87-1/2% of rated battery voltage*				A.C. Voltage	
			1 <sup>1/2</sup> hrs	2 hrs	3 hrs	4 hrs	Unit Dual Voltage	Current Maximum
Lead-Calcium	6	GSM10-BH	10	8	-	-	120VAC	.3A

\* National Electrical Code Specification

### How to Order

For standard units without options only order Series, Battery and Watts. Options are added to units by listing suffix at end of model number.

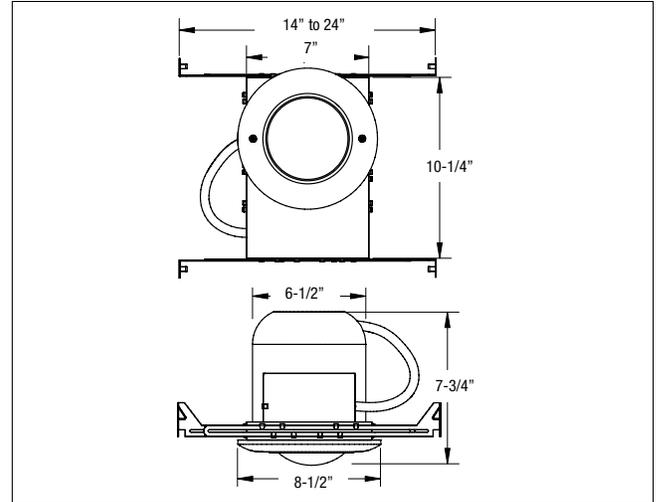
NOTE: Includes standard lamp (570.0016)

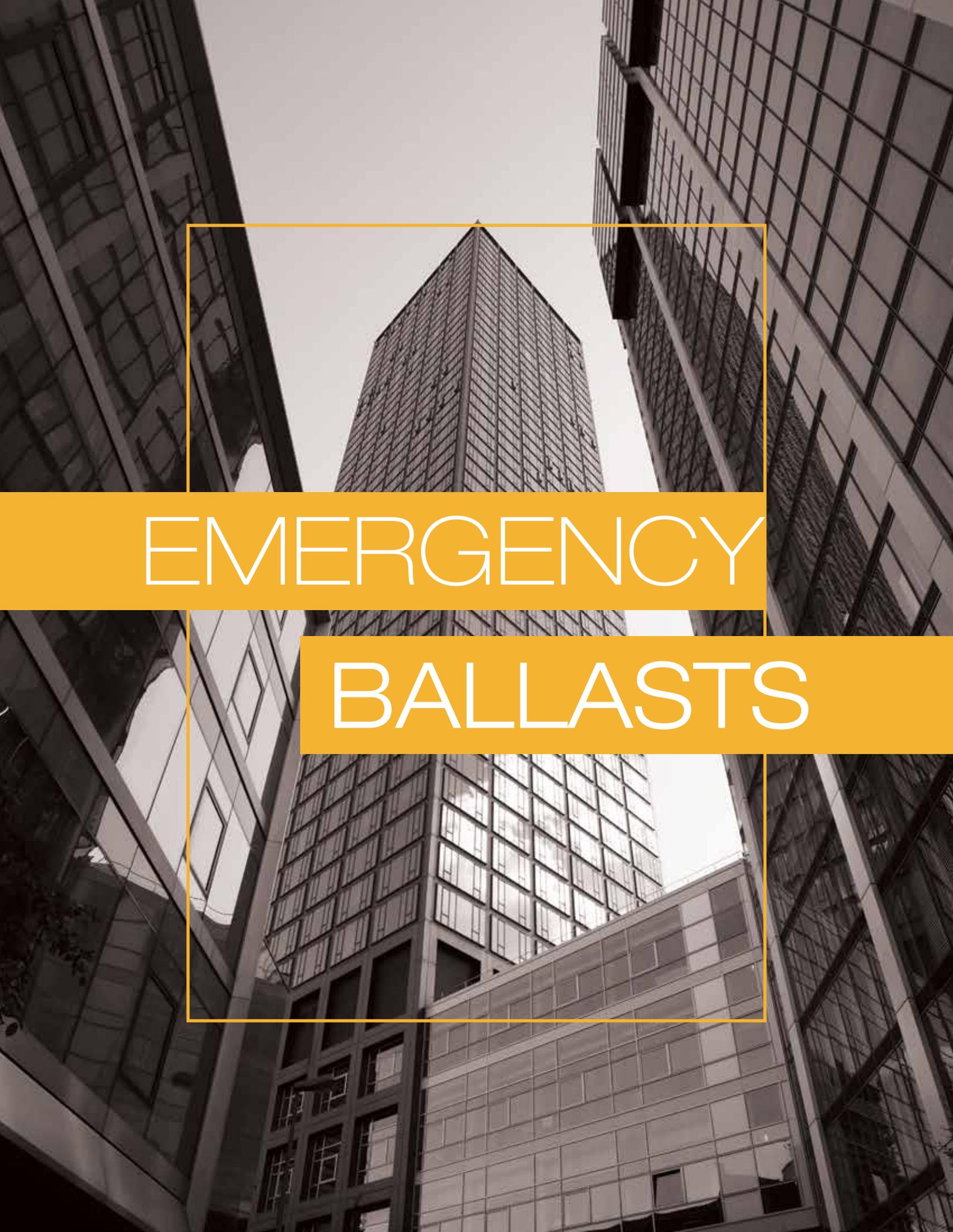
COLOR	SERIES	BATTERY TYPE	LAMP OPTION	MOUNTING OPTION	MODEL
Blank= White	GS= Series	M10= 10W Lead-Calcium	Wedge Base 9W standard	BH= Bar hanger (standard)	-NYC=Approved model*
					* Includes 12 watt lamp and metal trim.

Example: **GSM10BH-NYC**

### Dimensions

Dimensions are approximate and subject to change.





EMERGENCY

BALLASTS

# EMERGENCY BALLASTS

## Table Of Contents

					
About Emergency Ballast	Ballast/Lamp Reference Chart	FPDL-28 Series	FPDL/U Series	FPDL13-42-N Series	FPDL-500 Series
<b>P. 104</b>	<b>P. 105</b>	<b>P. 106</b>	<b>P. 107</b>	<b>P. 108</b>	<b>P. 109</b>
					
FPDL-HL-N Series	FPDL32 Series	FPDL1300 Series	EPC-1-E Series		
<b>P. 110</b>	<b>P. 111</b>	<b>P. 112</b>	<b>P. 113</b>		

# ABOUT EMERGENCY FLUORESCENT BALLAST PACKS

## About Emergency Fluorescent Ballast

Emergency Fluorescent Ballast Packs are completely self-contained battery-powered systems designed to invert DC battery current to AC current in order to operate AC lighting loads in the event of an emergency.

Under normal conditions: AC current flows into the Ballast, keeping the DC batteries charged, and AC current continues to power the AC lighting fixture.

In an Emergency situation: When AC current stops flowing into the Ballast, the Inverter converts DC battery current into AC current to power the AC lighting fixture.

## Lumens and Wattage Capacities

Emergency Fluorescent Ballasts come in various lumen output capacities and are designed to operate only 1 or 2 lamps in a fluorescent fixture type.

## Emergency Fluorescent Ballast:

Designed to operate fluorescent lighting loads, these ballasts can be mounted directly on or in the existing fluorescent fixture and are meant to operate one or two lamps within that fixture.

Emergency Fluorescent Ballasts are selected based on the lumen output levels needed in an emergency situation and the lamp type being used in the fluorescent fixture during normal AC operation.











TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

## FPDL13-42-N Series

Convert new or existing fluorescent fixtures into emergency lighting units  
 750 lumen emergency ballast

### Features

- Steel housing contains, battery, battery charger, transfer circuit and high frequency inverter
  - Operating temperature 32°F to 122°F (0°C to 50°C)
  - Internal or external mounting to a fluorescent fixture
  - Compatible with most one-, two-, three-, and four-lamp electronic standard and dimming AC
  - Operates one 17W-40W T8 through T12, two 13W-39W, one 13W-42W 4-pin compact or one 18W-40W 4-pin long compact fluorescent lamps
  - (1) Lamp 350-750 Lumens
  - (2) Lamps 425-750 Lumens
  - Can be wired to operate switched, un-switched or normally off fixtures without affecting normal operation
  - Will cold start and illuminate lamps
  - Fully Automatic solid state charger
  - High capacity, automatic, dust-tight instantaneous transfer relay
  - Low voltage disconnect prevents over discharge of battery
  - Automatic brownout protection
  - Battery connector prevents battery discharge during installation
  - Red charger monitor LED indicates charging of the battery and AC present
  - Momentary test switch allows for quick operational check of entire system
  - Nickel-Cadmium battery
  - Provides 90 minutes of emergency operation
  - Dual voltage 120/277VAC, 60Hz, 1.8W
  - UL924 Listed
  - Damp location listed
  - 3-year limited warranty
- Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

### Accessories (order as a separate item)

Remote Test Switch (Metal faceplate)	RTS
Remote Test Switch (Plastic faceplate)	RTS-1
Replacement Test Switch	TBTSP-E

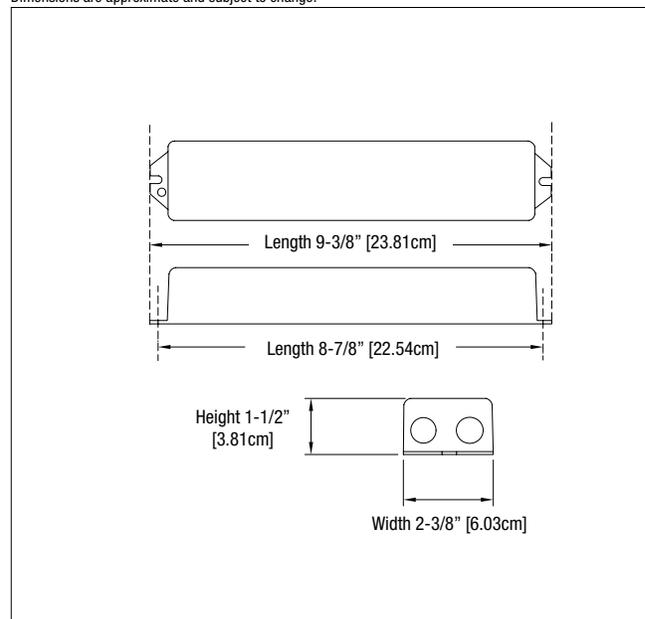
### Ordering Format

SERIES
FPDL13-42-N

EXAMPLE: FPDL13-42-N

### Dimensions

Dimensions are approximate and subject to change.



### Compatible Lamp Chart

LAMP	VOLTAGE	WATTAGE	INITIAL LUMENS	
			1-LAMP	2-LAMP
4-pin PL CF	120/277V	13W	350	425
4-pin PL CF		18W	400	550
4-pin PL CF		26W	475	650
4-pin PL CF		32W	600	750
4-pin PL CF		42W	750	—
4-pin Long CF		18W	550	—
4-pin Long CF		24W	600	—
4-pin Long CF		36W	650	—

TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



# FPDL-500 Series

Convert new or existing fluorescent fixtures into emergency lighting fixtures  
 500 lumen emergency ballast

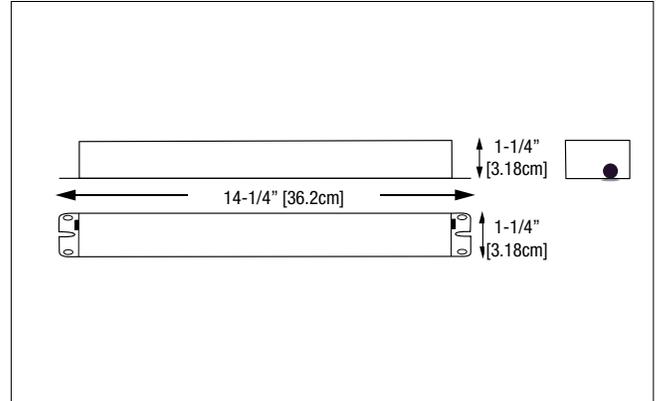


## Features

- Steel housing contains, battery, battery charger, transfer circuit and high frequency inverter
- Optional end caps available
- Operating temperature 32°F to 122°F (0°C to 50°C)
- Slim Design, for internal or external mounting to a fluorescent fixture
- Compatible with most one-, two-, three-, and four-lamp electronic standard and dimming AC ballast
- Operates one 21W-28W T5 fluorescent lamp. Refer to compatible lamp chart for a complete list of lamps
- (1) Lamp 325-500 Lumens
- Can be wired to operate switched, un-switched or normally off fixtures without affecting normal operation
- Will cold start and illuminate lamps
- Fully Automatic solid state charger
- High capacity, automatic, dust-tight instantaneous transfer relay
- Low voltage disconnect prevents over discharge of battery
- Automatic brownout protection
- Battery connector prevents battery discharge during installation
- Red charger monitor LED indicates charging of the battery and AC present
- Momentary test switch allows for quick operational check of entire system
- Nickel-Cadmium battery
- Provides 90 minutes of emergency operation
- Dual voltage 120/277VAC, 60Hz, 2.7W
- UL924 Listed
- Damp location listed
- 3-year limited warranty  
 Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

## Dimensions

Dimensions are approximate and subject to change.



## Compatible Lamp Chart

LAMP	VOLTAGE	WATTAGE	INITIAL LUMEN
			1-LAMP
T5	120/277V	14W	375
T5		21W	425
T5		28W	500
T8		17W	350
T8		32W	475
4-pin PL CF		13W	325
4-pin PL CF	18W	425	
4-pin PL CF	26W	475	

## Accessories (order as a separate item)

	External mounting kit includes wire bundle cover	071139-E
Remote Test Switch (Metal faceplate)		RTS
Remote Test Switch (Plastic faceplate)		RTS-1
Recommended for inaccessible locations. Test switch and charging indicator on a single mounting plate. 		
Replacement Test Switch		TBTSP-E

## Ordering Format

SERIES
FPDL-500

EXAMPLE: FPDL-500



TYPE:	_____
CATALOG #:	_____
NOTES:	_____

## FPDL-HL-N Series

Convert new or existing fluorescent fixtures into emergency lighting units  
3000 lumen emergency ballast

### Features

- Steel housing contains, battery, battery charger, transfer circuit and high frequency inverter
  - Operating temperature 32°F to 122°F (0°C to 50°C)
  - External mounting to a fluorescent fixture
  - Compatible with most one-, two-, three-, and four-lamp electronic standard and dimming AC ballast
  - Operates two 8W-54W T5/T5HO, two 17W-40W, one 17W-215W T8 through T12, two 13W-42W 4-pin compact, two 18W-50W or one 18W-55W 4-pin long compact fluorescent lamps
  - (1) Lamp 825-3000 Lumens
  - (2) Lamps 900-3000 Lumens per lamp
  - Can be wired to operate switched, un-switched or normally off fixtures without affecting normal operation
  - Will cold start and illuminate lamps
  - Fully Automatic solid state charger
  - High capacity, automatic, dust-tight instantaneous transfer relay
  - Low voltage disconnect prevents over discharge of battery
  - Automatic brownout protection
  - Battery connector prevents battery discharge during installation
  - Red charger monitor LED indicates charging of the battery and AC present
  - Momentary test switch allows for quick operational check of entire system
  - Nickel-Cadmium battery
  - Provides 90 minutes of emergency operation
  - Dual voltage 120/277VAC, 60Hz, 5.1W
  - UL924 Listed
  - Damp location listed
  - 3-year limited warranty
- Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

### Accessories (order as a separate item)

Remote Test Switch (Metal faceplate)	<b>RTS</b>
Remote Test Switch (Plastic faceplate)	<b>RTS-1</b>
Recommended for inaccessible locations. Test switch and charging indicator on a single mounting plate.	Charging Indicator Light Push Button Test Switch 
Replacement Test Switch	<b>TBTSP-E</b>

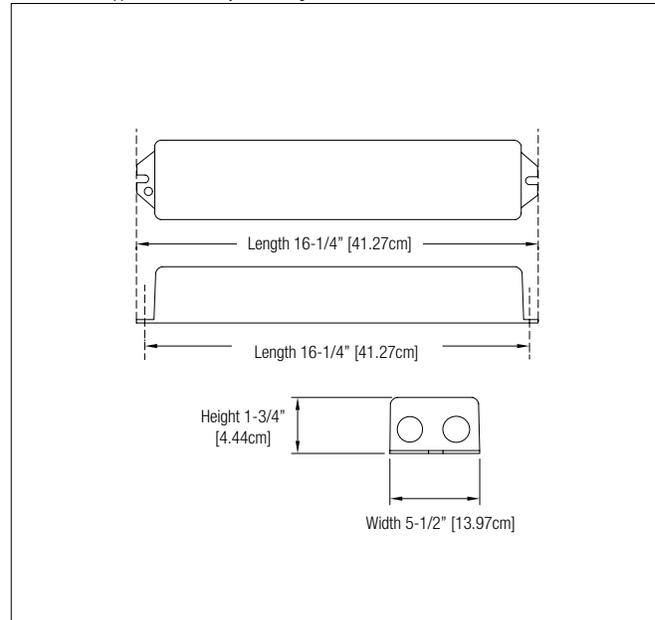
### Ordering Format

SERIES	OPTIONS
<b>FPDL-HL-N</b>	<b>Blank</b> = Standard Unit <b>-DL</b> = Damp location Listed

EXAMPLE: **FPDL-HL-N**

### Dimensions

Dimensions are approximate and subject to change.



### Compatible Lamp Chart

LAMP	VOLTAGE	WATTAGE	INITIAL LUMENS	
			1-LAMP	2-LAMPS
T5	120/277V	14W	1150	1200
T5		21W	1750	1800
T5		28W	2350	2425
T5HO		39W	2700	2850
T5HO		54W	2900	3000
T8		17W	1100	1150
T8		32W	2950	3000
T12		20W	875	900
T12		40W	2250	2400
T8		59W	2800	-
T12		110W	2950	-
T12		215W	3000	-
4-pin PL CF		13W	825	900
4-pin PL CF		18W	1100	1200
4-pin PL CF		26W	1500	1600
4-pin PL CF		32W	2200	2300
4-pin PL CF		42W	2450	2500
4-pin Long CF		18W	1250	1400
4-pin Long CF		24W	1750	1900
4-pin Long CF		36W	2200	2300
4-pin Long CF		40W	2350	2400
4-pin Long CF	50W	2250	2400	
4-pin Long CF	55W	2500	-	

TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



# FPDL32 Series

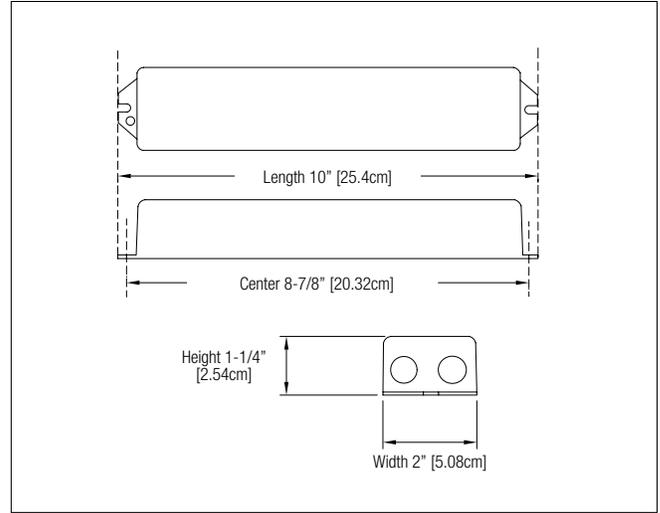
Convert new or existing fluorescent fixtures  
 into emergency lighting units 500 lumen  
 emergency ballast

## Features

- Low profile steel housing contains, battery, battery charger, transfer circuit and high frequency inverter
- Optional end caps available
- Operating temperature 68°F to 122°F (20°C to 50°C)
- Internal or external mounting to a fluorescent fixture
- One 17-40W (2'-4') T8, T10, T12 or one 28W (2'-4') T5, T8, 40W Biax (Long CFL), or 50W Biax (Long CFL) fluorescent lamp
- (1) Lamp 375-500 Lumens
- Can be wired to operate switched, un-switched or normally off fixtures without affecting normal operation
- Will cold start and illuminate lamps
- Fully Automatic solid state charger
- High capacity, automatic, dust-tight instantaneous transfer relay
- Low voltage disconnect prevents over discharge of battery
- Automatic brownout protection
- Battery connector prevents battery discharge during installation
- Red charger monitor LED indicates charging of the battery and AC present
- Momentary test switch allows for quick operational check of entire system
- Nickel-Cadmium battery
- Provides 90 minutes of emergency operation
- Dual voltage 120/277VAC, 2.5W
- UL924 Listed
- Damp location listed
- 3-year limited warranty  
 Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

## Dimensions

Dimensions are approximate and subject to change.



## Accessories (order as a separate item)

	External mounting kit includes wire bundle cover	<b>071139-E</b>
	Remote Test Switch (Metal faceplate)	<b>RTS</b>
	Remote Test Switch (Plastic faceplate)	<b>RTS-1</b>
	Recommended for inaccessible locations. Test switch and charging indicator on a single mounting plate.	
	Replacement Test Switch	<b>TBTSP-E</b>

## Compatible Lamp Chart

LAMP	VOLTAGE	WATTAGE	INITIAL LUMEN
			1-LAMP
<b>F17 T8</b>	<b>120/277V</b>	<b>17</b>	450
<b>F28 T8</b>		<b>28</b>	460
<b>F32 T8</b>		<b>32</b>	475
<b>28W T5</b>		<b>28</b>	500
<b>F15 T12</b>		<b>15</b>	375
<b>F20 T12</b>		<b>20</b>	425
<b>F40 T12</b>		<b>40</b>	450
<b>40W Long Compact</b>		<b>40</b>	450
<b>40W Circling</b>		<b>40</b>	450

## Ordering Format

<b>SERIES</b>
<b>FPDL32</b>

EXAMPLE: **FPDL32**



TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



# EPC-1-E Series

## Emergency Transfer Switch

### for Generator Supplies Power to Switched Lighting Fixtures

### Features

- Thermoplastic UL94-5VA
  - Compatible with standard, energy-saving, dimming and electronic AC ballasts<sup>1</sup>
  - Wall and ceiling mount
  - Will operate incandescent and fluorescent lamp types in the designated circuit for the duration of the generator supply<sup>2</sup> (does not operate LED lamp types)
  - Full light output
  - Allows auxiliary generator power on a switched fixture
  - Dual Voltage 120/277V 60hz
  - UL924 Listed
  - Meets or exceeds all National Electrical Code and Life Safety Code Emergency Lighting Requirements
  - 3-year limited warranty
- Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

<sup>1</sup> Excluding LED's

<sup>2</sup> When using EPC-1 to control more than 10 emergency ballasts with a high corrective power factor capacitor, consult factory for more information regarding inrush currents.

### Electrical Specifications:

- Model EPC-1-E-120/277V
- 120V or 277V Sensing Input
- 120V or 277V Load
- 800W Incandescent Load Rating at 120V
- 1500W Incandescent Load Rating at 277V
- N.C. Contact
- UL924 Listed
- 20 Amp Ballast Load Rating

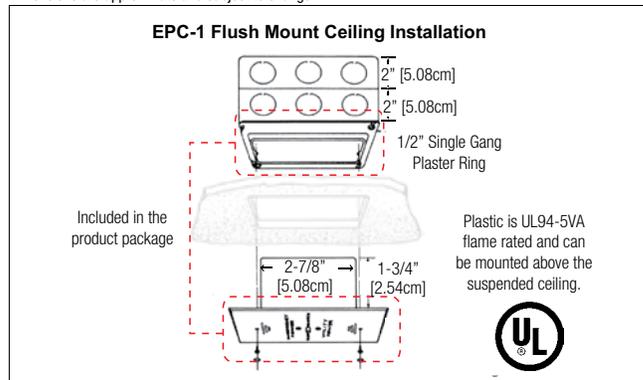
### Ordering Format

SERIES
EPC-1-E

EXAMPLE: EPC-1-E

### Dimensions

Dimensions are approximate and subject to change.



### Mechanical Specifications:

- Mounts in 4-11/16" Junction Box with single gang plaster ring
- UL94-5VA Rating
- Shipping Weight: 8 oz
- Temperature: 32°F - 140°F (0°F - 60°F) | Color : White
- Flush Mounted Size: 4-3/4" x 2-3/4" x 1/4"
- Body Size: 2-7/8" x 1-3/4" x 1-3/4"

### Emergency Operation:

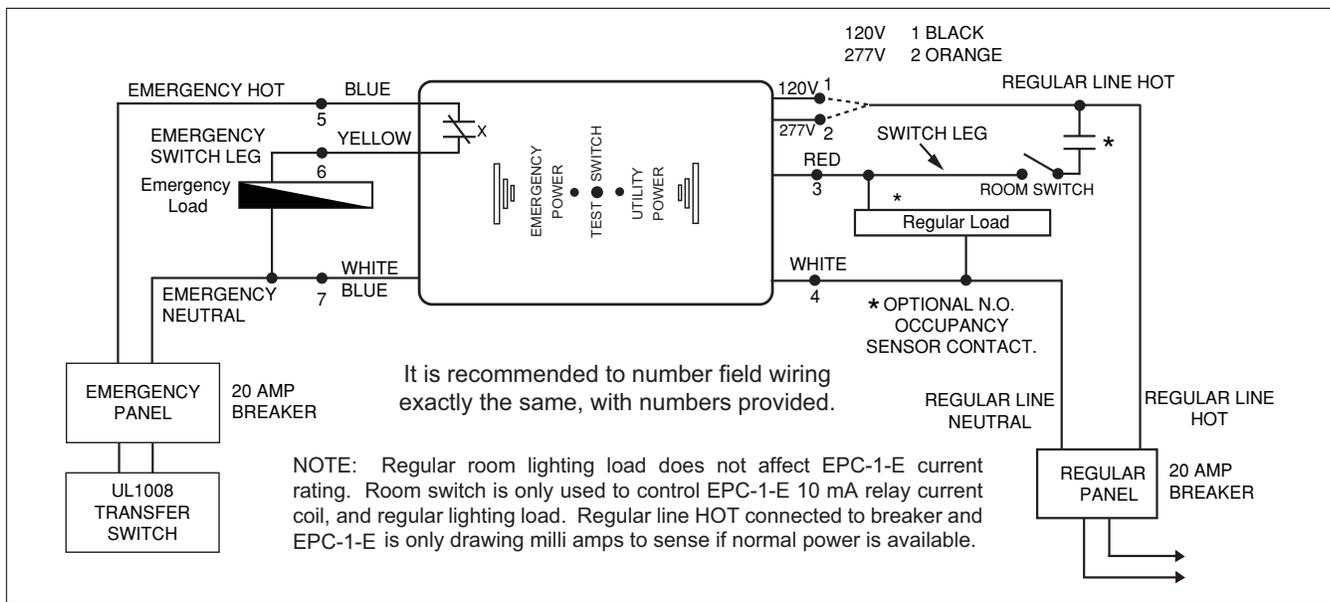
The EPC-1-E will operate any lamp type in the designated fixture for the duration of the generator supply

### Initial Illumination:

The EPC-1-E will operate the designated lamp at full light output

Weight	8 oz
Approval	UL924 Listed

### Wiring Diagrams





CENTRAL &

INVERTER SYSTEMS

# CENTRAL & INVERTER SYSTEMS

## Table of Contents

					
Low Capacity Mini-Inverter Series	Mini-Inverter Series	<b>Emerg-Power Systems</b> Features & Benefits	<b>Emerg-Power Systems</b> Compact Series	<b>Emerg-Power Systems</b> IPS Single Phase Series	<b>Emerg-Power Systems</b> FTC Single Phase Series
<b>P. 116-117</b>	<b>P. 118-119</b>	<b>P. 120-121</b>	<b>P. 122-123</b>	<b>P. 124-125</b>	<b>P. 126-127</b>
					
<b>Emerg-Power Systems</b> 3FTC Three Phase Series	<b>Emerg-Power Systems</b> FTC3R & 3FTC3R Series	<b>Emerg-Power Systems</b> Option Details	<b>Emerg-Power Systems</b> Control Panel & Display	<b>Emerg-Power Systems</b> Central Systems Request Data	
<b>P. 128-129</b>	<b>P. 130</b>	<b>P. 131</b>	<b>P. 132</b>	<b>P. 133</b>	



TYPE:	_____
CATALOG #:	_____
NOTES:	_____

# Low Capacity Mini Inverter Series

## Interruptible Unit Equipment

### Highlights

The **Low Capacity Mini Inverter** is a UL Listed, stand-alone pure sine wave output inverter designed to provide power to designated emergency lighting fixtures. In a power loss situation, it will supply power from the onboard battery supply.

The **Low Capacity Mini Inverter** works in conjunction with incandescent, LED, and fluorescent fixture types, and will automatically run switched, normally-on, or normally-off designated emergency fixtures.

The **Low Capacity Mini Inverter** is ideal for applications requiring an emergency source for lighting arrangements that utilize multiple lamp and fixture types. It is available in surface mount and T-grid (plenum rated).

### Features

- Operated lamps: Incandescent, LED, fluorescent and ballast combinations, including triac dimmable ballasts
- Components: True sinusoidal AC pulse width modulated design provides clean 60Hz. Emergency output
- "Soft Start" design reduces fixture inrush current and accepts load power factor range from 0.44 lead to 0.44 lag
- Construction: Heavy-duty steel cabinet. White powder paint coating provides scratch and corrosion resistance. Available for surface mount or T-grid installation (plenum rated)
- Emergency lighting supplied from one convenient source
- Input/output voltage: 120V 60 Hz or 277V 60 Hz
- Allows for remote mounting of emergency fixtures at distances of up to 1000 feet
- Maintenance-free Lead-Calcium battery
- Low voltage battery disconnect
- Unit comes standard with electronic lockout and brownout circuits
- Meets or exceeds all National Electrical Codes and Life Safety Codes or Life Safety Code Emergency Lighting Requirements
- Emergency Lighting Requirements UL924 Listed
- 3-year warranty and 7-year pro-rata battery warranty  
Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

### Suggested Specification

Emergency lighting shall be provided by inverter unit equipment designed to operate designated incandescent, fluorescent and LED fixtures on emergency power at their full nominal lumen rating during the full 90 minutes of emergency discharge cycle. System output will be rated at \_\_\_\_\_ watts for 90 minutes. The system's voltage rating shall be 120 / 277 VAC input/output. The inverter unit shall allow for connected emergency fixture(s) to be normally-on, normally-off, switched or triac dimmable ballasts without affecting lamp operation during a power failure. Upon utility power loss, the inverter unit shall deliver 100% of its rated output to the emergency fixtures regardless of the local switch or dimmer position, and will provide power to emergency fixtures at distances of up to 1000 feet. The housing shall be manufactured with a white baked-on powder coat paint finish. The unit's electronics shall include a self-contained inverter section with a fully automatic, thermal compensating dual mode battery charger, AC lockout feature, low voltage battery disconnect, DC overload, short circuit and brownout protection as standard. The unit shall utilize a sealed Lead-Calcium battery with a 10-year design life. The inverter system shall be UL 924 Listed and labeled. The unit shall be covered under a 3-year warranty on the electronics and battery plus an additional 7-year pro-rata warranty on the battery.

### Specifications

Transfer Time	less than 1 second
Voltage Regulation on Emergency	+/- 5%
Frequency Regulation on Emergency	60 Hz +/- 0.5%
Load Power Factor Range	• 0.44 lead to 0.44 lag
Operating Temperature	68° to 86°F (20° to 30°C)

### Warranty

When operated under normal conditions, **Emergi-Lite®** inverter products will provide years of dependable service. The unit is covered by a complete 3-year warranty against defects in material or workmanship, plus an additional 7-year pro-rata warranty on the battery.

The inverter unit shall be **Emergi-Lite®** model: \_\_\_\_\_

TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



## Interruptible Unit Equipment 120V & 277V



### Electrical Characteristics & Dimensions

NOTE: For wiring diagram, please refer to the specification sheets.

SYSTEM TYPE	POWER RATING	SINE WAVE	INSTALLATION	CABINET DIMENSIONS			NO. OF BATTERY	WEIGHT
				W"	H"	D"		120V & 277V
EMILC32-S	32W/VA	Yes	Surface mount	14-3/4"	6-7/8"	3-1/8"	1	14 lbs
EMILC32-T	32W/VA	Yes	T-grid mount	23-7/8"	6-1/4"	4"	1	15 lbs
EMILC55-S	55W/VA	Yes	Surface mount	14-3/4"	6-7/8"	4-3/8"	1	18 lbs
EMILC55-T	55W/VA	Yes	T-grid mount	23-7/8"	6-1/4"	4"	1	19 lbs

### Power Consumption And Unit Rating

MODEL NUMBER	INPUT RATING	EMERGENCY POWER AVAILABLE FOR LOAD (90 MIN)
EMILC32	41VA	32W
EMILC55	64VA	55W

### How to Order

SERIES	CAPACITY	VOLTAGE	BATTERY TYPE	MOUNTING
<b>EMILC</b>	<b>32</b> = 32W/VA <b>55</b> = 55W/VA	<b>BLANK</b> = 120/277VAC	<b>BLANK</b> = Lead-Calcium	<b>-S</b> = Surface mount housing <b>-T</b> = Plenum rated ceiling T-grid mount housing

Example: **EMILC32-S**



TYPE: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

NOTES: \_\_\_\_\_

## Mini Inverter Series

### Interruptible Unit Equipment

### Highlights

The **Mini Inverter** is a UL Listed stand-alone pure sine wave (250W and up) output inverter designed to provide power to designated emergency lighting fixtures. In a power loss situation, it will supply power from the onboard battery supply.

The **Mini Inverter** works in conjunction with incandescent, LED, and fluorescent fixture types and will automatically run switched, normally-on, or normally-off designated emergency fixtures.

The **Mini Inverter** is ideal for applications requiring an emergency source for lighting arrangements that utilize multiple lamp and fixture types and is available in surface mount and comes with a 3 year warranty and 7 year pro-rata battery warranty.

Detailed warranty terms located at: [www.emergi-lite.com/usa/files/EL\\_Warranty.pdf](http://www.emergi-lite.com/usa/files/EL_Warranty.pdf)

### Features

- Lamps operated: Incandescent, LED, fluorescent lamps and ballast combinations, including triac dimmable ballasts (consult factory if DALI dimming)
- Components: High-efficiency pure sine wave inverter (250W and up), temperature-compensated charger, 12V oversized Valve Regulated Lead-Acid (VRLA) battery
- Construction: 14-gauge (400W & 720W) or 18-Gauge (125W & 250W) steel housing
- Emergency lighting supplied from one convenient source
- Input/Output voltage 120V 60 Hz or 277V 60 Hz
- Replacable output fuse protection
- Line voltage allows for remote mounting of emergency fixtures at distances up to 1000 feet
- Low Voltage Battery Disconnect
- Unit comes standard with electronic lockout and brownout circuits
- Meets or exceeds all National Electrical Code and Life Safety Code Emergency Lighting Requirements UL924 Listed
- Cabinet in factory white semi-gloss powder-coat paint finish
- May accept load to its full capacity when load feature power factor of 0.9 for 250W model and 0.8 for 125, 400 and 720W model
- Standard auto-diagnostic, non-audible, Nexus® system interface optional with an improved minimum load lost detection of 10%
- Standard lighting control override for 0-10V dimming systems

### Replacement Battery

EMIU-125	860.0024-E
EMIU-250	2X 860.0024-E
EMIU-400	2X 860.0043-E
EMIU-720	2X 860.0096-E

### Suggested Specification

Emergency lighting shall be provided by inverter unit equipment designed to operate designated incandescent, fluorescent and LED fixtures on emergency power at their full nominal lumen rating during the full 90 minutes emergency discharge cycle. System output will be rated at \_\_\_\_\_ watts for 90 minutes and provide fused output connections to the load. The system's voltage rating shall be \_\_\_\_\_ VAC input/output. The inverter unit shall allow for connected emergency fixture(s) to be normally-on, normally-off, switched or triac dimmable ballasts without affecting lamp operation during a power failure. Upon utility power loss, the inverter unit shall deliver 100% of its rated output to the emergency fixtures regardless of the local switch or dimmer position, and will provide power to emergency fixtures at distances of up to 1000 feet. The housing shall be manufactured using 14-gauge (400W & 720W) or 18-Gauge (125W & 250W) steel with a white baked-on powder coat paint finish. The unit's electronics shall include a self-contained inverter section with a fully automatic, thermal-compensating variable-rate battery charger, AC lockout feature, low voltage battery disconnect, DC overload, short circuit and brownout protection as standard. The unit shall utilize a sealed Lead-Acid battery with a 10-year design life. The inverter system shall be UL 924 Listed and labeled. The unit shall be covered under a 3-year warranty on the electronics and battery and a 7-year pro-rata warranty on the battery.

### Specifications

Transfer Time	less than 1 second
Voltage Regulation on Emergency	+/- 3%
Frequency Regulation on Emergency	60 Hz +/- 1%
Load Power Factor Range	<ul style="list-style-type: none"> <li>• 250W model: 0.9 leading to 0.9 lagging</li> <li>• 125, 400 &amp; 720W models: 0.8 leading to 0.8 lagging</li> </ul>
Operating Temperature	68° to 86°F (20° to 30°C)

### Warranty

All **Emergi-Lite**® inverter products receive 100% quality inspection before shipment to insure proper and satisfactory operation. When operated under normal conditions, **Emergi-Lite**® inverter products will provide years of dependable service. The unit is covered by a complete 3-year warranty against defects in material or workmanship, and a 7-year pro-rata battery warranty.

The inverter unit shall be **Emergi-Lite**® model: \_\_\_\_\_.

TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



Interruptible Unit Equipment 125W, 250W, 400W  
 or 720W Standard with Non-Audible Advanced  
 Diagnostics Circuitry & Lighting Control Override



**Electrical Characteristics & Dimensions**

NOTE: For wiring diagram, please refer to the specification sheets.

POWER RATING	SINE WAVE	INSTALLATION	CABINET DIMENSIONS			NO. OF BATTERY	TOTAL WEIGHT	WEIGHT W/O BATTERY
			W"	H"	D"		120V & 277V	120V & 277V
125W	Modified	T-Bar	24"	6.5"	8"	1	50 lbs	22 lbs
125W	Modified	Wall	16.5"	12.2"	7.3"	1	50 lbs	22 lbs
250W	Pure	Wall	27"	12.2"	7.3"	2	100 lbs	45 lbs
400W	Pure	Wall	24"	10.5"	20"	2	150 lbs	65 lbs
720W	Pure	Wall	24"	14.5"	20"	2	220 lbs	95 lbs

**Power Consumption And Unit Rating**

MODEL NUMBER	AC SPECS	EMERGENCY POWER AVAILABLE FOR LOAD				
		90 MIN	2H	3H	4H	
EMIU-125	120/277VAC	1.15 / 0.70 Amps	125W	83W	62W	47W
EMIU-250		2.75 / 1.20 Amps	250W	167W	125W	94W
EMIU-400		4.60 / 2.00 Amps	400W	300W	200W	150W
EMIU-720		9.60 / 4.00 Amps	720W	480W	360W	270W

**How to Order**

SERIES	CAPACITY	VOLTAGE	DIAGNOSTIC FEATURE	OPTIONS
<b>EMIU</b>	-125= 125W -250= 250W -400= 400W -720= 720W	<b>BLANK</b> = 120/120VAC or 277/277VAC	-Blank= Advanced-Diagnostic, non-audible* -AD= Advanced-Diagnostic, audible* -NEX= Nexus® wired -NEXRF= Nexus® wireless	-D1= Time Delay (5 minutes) -D2= Time Delay (10 minutes) -D3= Time Delay (15 minutes) -SAC= Service Alarm Contact* -T= Recessed T-Bar mounting (125W unit only)

\* Minimum load required: 10% of unit capacity

\* Service alarm contact (SAC) shall provide a 24V signal, the charger board will indicate a fault by choosing a contact. Not available with 720 capacity

Example: **EMIU-720**

TYPE: _____
CATALOG #: _____
NOTES: _____

# EMERG-POWER SYSTEMS

## Features & Benefits

### Highlights

#### PERFORMANCE

Emerg-Power Systems work with any type of lighting load to provide full light output for a minimum of 90 min. They are designed to support incandescent, fluorescent, HID\*, quartz re-strike, LED or halogen lamps. They will work to power into these loads at cold starts for all normally off circuits or normally on circuits.

\* Except IPS systems

#### TRUE SINE WAVEFORM

Using a solid-state, pulse width modulation (PWM) inverter the systems produce pure sinusoidal output waveform with less than 3% maximum Total Harmonic Distortion (THD) for linear loads. Microprocessor and crystal controlled.

#### RELIABILITY

Emerg-Power Systems use third generation inverter technology. The proven solid design and double ratings of all critical components. LVD (Low Voltage Disconnect) for long power outages eliminates battery drain.

#### BATTERIES

Front access connections for easy installation significantly reduce the footprint, installation and maintenance time while increasing safety. Automatic restart and recharge upon restoration of utility.

#### APPROVALS

UL listed to UL924. Meets UL 924 Listed, NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI.

New York City approved.

#### APPLICATIONS

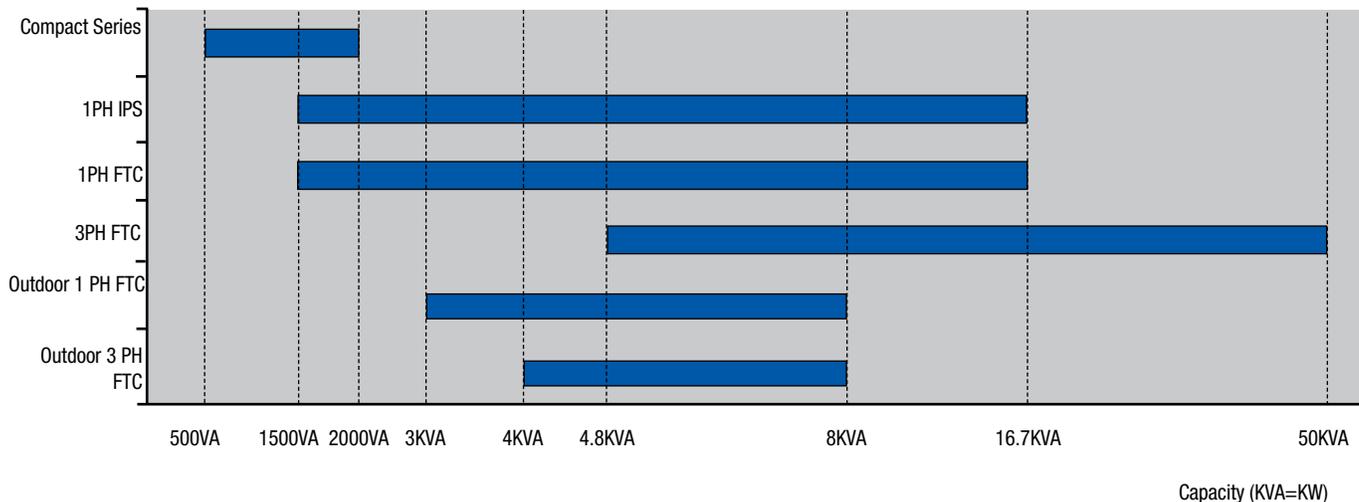
Emerg-Power Systems can be used in almost every type of building, and are well-suited for architecturally sensitive applications or areas where maintenance costs and individual testing of unit equipment becomes significant.

Emerg-Power Systems are designed to work with power factor corrected as well as the most recent T5 and T5-HO electronic ballasts.

#### OPTIONS

The full range of options available, such as integrated output circuit breakers, bypass relays, dry contacts, etc., makes Emerg-Power Systems an industry leader in emergency lighting central systems.

### System type



TYPE: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

NOTES: \_\_\_\_\_

# EMERG-POWER SYSTEMS

## Features & Benefits

Features
<p><b>SELF-DIAGNOSTIC/SELF-TESTING</b></p> <ul style="list-style-type: none"> <li>• Programmable monthly and annual self-testing. Proven self-diagnostic with over 120 parameters stored in separate memory logs for Test, Event and Alarm.</li> <li>• Microprocessor monitoring and control.</li> </ul>
<p><b>LOW HEAT DISSIPATION</b></p> <ul style="list-style-type: none"> <li>• Very low heat loss technology in normal operating mode (see specifications for exact values). Convection cooling in normal mode with forced air during emergency mode.</li> <li>• Battery cabinets: convection cooling only.</li> </ul>
<p><b>MAXIMUM EFFICIENCY</b></p> <ul style="list-style-type: none"> <li>• Highest efficiency in the industry, 98% at 100% load with no requirement for cooling in normal operating mode.</li> <li>• Low input harmonic distortion &lt;10%.</li> </ul>
<p><b>VERSATILE INSTALLATION</b></p> <ul style="list-style-type: none"> <li>• Modular design, easy front access freestanding cabinets, fasten together when more than one cabinet is required.</li> <li>• Optional seismic kit available.</li> <li>• All wiring provided is pre-cut and terminated, along with the necessary hardware and electrical fittings, for proper installation.</li> </ul>
<p><b>COMPLETE PROTECTION</b></p> <ul style="list-style-type: none"> <li>• Input circuit breaker and fused battery circuit are standard.</li> <li>• Systems offer overload capacity, short-circuit protection, current-limiting, low-battery disconnect, reverse polarity and brownout protection as standard.</li> </ul>
<p><b>THERMAL PERFORMANCE</b></p> <ul style="list-style-type: none"> <li>• Bonded fin heat sink technology for maximum thermal performance.</li> <li>• Cooling fans are energized only in inverter mode.</li> </ul>
<p><b>MONITORING AND CONTROL</b></p> <ul style="list-style-type: none"> <li>• User-friendly programmable interface with LED indicators and LCD display provides full metering values, easy program and control functions and a wide range of visual and audible alarms.</li> </ul>

Benefits
<p><b>COMPLIANCE WITH NFPA101</b></p> <ul style="list-style-type: none"> <li>• Self-testing meets the requirements of NFPA and UL. User programmable time of testing.</li> <li>• Test results, events and alarms can be downloaded from history logs. Load monitoring. Reduced testing/service time.</li> </ul>
<p><b>LESS AIR-CONDITIONING</b></p> <ul style="list-style-type: none"> <li>• Reduced costs for air-conditioning required to ensure the optimum operating temperature when compared with equivalent systems that dissipate much more heat.</li> <li>• Higher reliability of fans and the electronic components.</li> </ul>
<p><b>LOWER ENERGY BILLS</b></p> <ul style="list-style-type: none"> <li>• Low consumption of the system itself will result in lower energy bills paid over the system life time. Comparative analysis available on request.</li> </ul>
<p><b>EASY TO INSTALL</b></p> <ul style="list-style-type: none"> <li>• Quick installation and connection through flexible cable entries and fast access terminal blocks.</li> <li>• Reduced footprint for systems with stackable cabinets.</li> <li>• Low MTTR (&lt;15 min.) due to modular design, quick disconnect means and frontal access.</li> </ul>
<p><b>REDUCED DAMAGE RISKS</b></p> <ul style="list-style-type: none"> <li>• Full system protection eliminates damage created by external events and increases the lifetime of the electronics and batteries. Also will provide safety during maintenance.</li> </ul>
<p><b>INCREASED MTBF</b></p> <ul style="list-style-type: none"> <li>• Increased reliability and reduced preventative maintenance.</li> <li>• No air filters needed.</li> </ul>
<p><b>EASY MAINTENANCE</b></p> <ul style="list-style-type: none"> <li>• Easier diagnostic, troubleshooting, preventative maintenance and service through the indicators and display or by using the history logs.</li> <li>• Remote versions available.</li> </ul>



TYPE:	_____
CATALOG #:	_____
NOTES:	_____

# Emerg-Power Systems Compact Series

## Features

- 98% efficient at full load
  - PWM/MOSFET 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
  - Field upgradeable (500VA steps)
  - 90 min. standard run time
  - Electronic and magnetic ballast compatible
  - Automatic event, test and alarm log
  - LCD display
  - Small footprint (stackable cabinets)
  - Maintenance-free standard batteries
  - Forced air cooling during emergency mode only
- UL listed to UL924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.**

## Electrical/Mechanical Characteristics<sup>4</sup>

(data provided for standard Lead Calcium batteries)<sup>1,4</sup>

POWER RATING <sup>1</sup> VA= W	EFFIC. AT FULL LOAD %	MAX. INPUT CURRENT (A)		HEAT LOSS IN NORMAL MODE (BTU/HR)	BATT. VDC	BATT. A	NO. OF BATT.	UPS CABINET DIMENSIONS			BATTERY CABINET DIMENSIONS <sup>2,3</sup>			NO. OF BATT CAB.	BATT. CAB. WEIGHT LBS	UPS CAB. WEIGHT LBS	BATT. WEIGHT LBS	TOTAL SYSTEM WEIGHT LBS
		120V	277V					W"	H"	D"	W"	H"	D"					
500	98	5.2	2.3	34	48	13.5	4	26	10	10	26	10	10	1	22 lbs	77 lbs	107 lbs	206 lbs
1000	98	10.5	4.5	68	48	26.5	8	26	10	10	26	10	10	2	22 lbs	77 lbs	214 lbs	335 lbs
1500	98	15.6	6.8	102	48	40	12	26	10	10	26	10	10	3	22 lbs	77 lbs	321 lbs	464 lbs
2000	98	20.8	9	136	48	52	16	26	10	10	26	10	10	4	22 lbs	77 lbs	428 lbs	592 lbs

<sup>1</sup> System capacity can be upgraded in the field up to 2000VA by adding more battery cabinets. Re-programming required by factory service technician.

<sup>3</sup> Battery cabinets are stackable. Must be installed under the electronics cabinet

<sup>2</sup> Batteries are installed in separate modular cabinets

<sup>4</sup> Special voltages can change the size, weight or number of cabinets

## How to Order

INPUT VOLTAGE*	BATTERY TYPE	VA/W	SYSTEM TYPE	OUTPUT VOLTAGE*	RUN TIME*	INPUT BREAKER	OUTPUT BREAKERS*	OPTIONS*
<b>120</b> <b>277</b>	<b>SG= Lead-Calcium</b>	<b>500</b> <b>1000</b> <b>1500</b> <b>2000</b>	<b>-FTCM</b>	<b>-120</b> <b>-277</b>	<b>-90</b>	<b>-ICB</b>	<b>-OCBxxxx=</b> No trip alarm* <b>-OCAxxxx=</b> With trip alarm*	<b>-NOFF=</b> Normally OFF output <b>-WB=</b> Wall mount bracket <b>-DCS=</b> Dry summary alarm contacts <b>-INVON=</b> Inverter on dry contact <b>-VTD=</b> Variable time delay <b>-BPR=</b> Bypass relay <b>-RMP=</b> Remote metering panel <b>-RSAP=</b> Remote summary alarm panel <b>-RS232=</b> Communication interface <b>-MOD=</b> Modem <b>-FLR=</b> Floor blanket
* Special voltages may change the size, weight or number of cabinets				* Special voltages may change the size, weight or number of cabinets	* Other run times available		* Max. 3 more additional output breakers for a total of 4. See page 131 for output breakers details.	* See page 131 for options description

Example: **120SG1500-FTCM-120-90-ICB-OCB0420-WB**

TYPE: \_\_\_\_\_  
CATALOG #: \_\_\_\_\_  
NOTES: \_\_\_\_\_



# Uninterruptible Emergency Lighting, 1PH, Inverter System 500VA – 2000VA

## System Specifications

### GENERAL

<b>Design</b>	Stand-by no break. PWM inverter type utilizing MOSFET technology with 2ms transfer time
<b>Control</b>	<ul style="list-style-type: none"> <li>• Microprocessor controlled, 2 x 20-character display with touch pad controls &amp; functions</li> <li>• 5 LED indicators &amp; alarm with ring-back feature</li> </ul>
<b>Metering</b>	Input & Output Voltage, Battery Voltage, Battery & Output Current, Output VA, Temperature, Inverter Wattage
<b>Communications</b>	Optional RS-232 port (DB9)

### ELECTRICAL INPUT

<b>Voltage</b>	120 or 277VAC, 1-phase 2-wire, +10%/ -15% Contact factory for all other voltage.
<b>Input Power Walk-In</b>	Limiting inrush current to less than 125%, 10 times for 1 line cycle
<b>Input Frequency</b>	60Hz, +/-3Hz
<b>Protection</b>	Standard Input Circuit Breaker
<b>Harmonic Distortion</b>	<10%
<b>Power Factor</b>	0.5 lag/lead

### ELECTRICAL OUTPUT

<b>Voltage</b>	120 or 277VAC, 1-phase 2-wire Contact factory for all other voltage.
<b>Static Voltage</b>	Load current change +/-2%, battery discharge +/-12.5%
<b>Dynamic Voltage</b>	+/-2% for +/-25% load step change, +/-3% for a 50% load step change, recovery within 3 cycles
<b>Harmonic Distortion</b>	<3% THD for linear load
<b>Output Frequency</b>	60Hz +/- 0.05Hz during emergency mode
<b>Load Power Factor</b>	0.5 lag to 0.5 lead
<b>Inverter Overload</b>	115% for 5 minutes
<b>Protection</b>	Standard Output Circuit Breaker (normally on)
<b>Crest Factor</b>	2.8

### ENVIRONMENTAL CONDITIONS

<b>Storage/Transport</b>	<ul style="list-style-type: none"> <li>• -4°F to 158°F (-20°C to 70°C) without batteries</li> <li>• 0°F to 104°F (-18°C to 40°C) with batteries (max. 3 months at 104° F (40° C))</li> </ul>
<b>Operating Temperature</b>	System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is between 68° F and 86°F (20°C to 30°C). Battery performance can be affected by temperature
<b>Altitude</b>	<10,000 feet (above sea level) without de-rating
<b>Relative Humidity</b>	0 to 95% non-condensing
<b>Audible Noise</b>	45 dBA @ 1m from surface in emergency mode

### CABINETS

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

### INVERTER

Using MOSFET/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 12 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. 90 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 90-minute annual function. The front-mounted control panel includes 5 LED indicators, a 2-line 20-character LCD 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

### OPTIONAL FEATURES

Normally OFF output, Output Circuit Breakers, Output Trip Alarm, RS232 communication port, 12 Hours Fast Recharge, Remote Meter Panel, Remote Summary Alarm Panel, Summary Alarm Dry Form C Contact, Inverter on Dry Contacts, Variable Time Delay, Modem, Bypass Relays, Wall mount bracket

### FACTORY START-UP

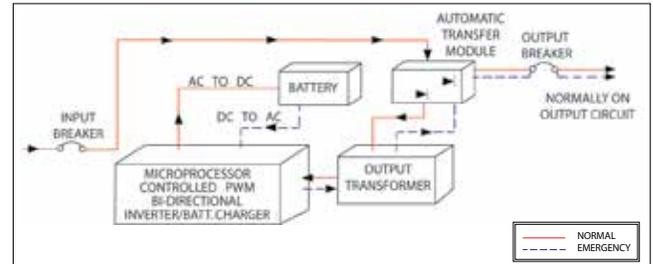
Includes one additional year of warranty. See warranty conditions.

### 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.

### SINGLE LINE DIAGRAM



Characteristics, specifications and dimensions subject to change without notice.



TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 NOTES: \_\_\_\_\_



Interruptible Emergency Lighting  
 Inverter System 1.5Kva –16.7Kva

**System Specifications**

**GENERAL**

Design	Stand-by, PWM inverter type utilizing IGBT technology with 50ms transfer time.
Control	<ul style="list-style-type: none"> <li>• Microprocessor controlled , 2 x 20-character display with touch pad controls &amp; functions</li> <li>• 5 LED indicators &amp; alarm with ring-back feature</li> </ul>
Metering	Input & Output Voltage, Battery Voltage, Battery & Output Current, Output VA, Temperature, Inverter Wattage
Communications	RS-232 port (DB9)

**CABINETS**

Modular design, freestanding NEMA Type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design through hinged lockable doors requires only 39" front clearance and 12" top clearance. Cabinets are stackable if required to further reduce the footprint. Top and left side conduit entry with knockouts.

**INVERTER**

Using IGBT/PWM technology the inverter converts 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 12 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 standard with 10 year, maintenance free, sealed valve regulated, front terminals Lead-Calcium batteries. 20 year sealed Lead-Calcium or wet Nickel-Cadmium batteries also available. 90 min. standard discharge time at full load under normal operating temperature. Low Voltage Disconnect protection included. No special ventilation required.

**SELF-DIAGNOSTICS**

Automatic self tests consist of a 5-minute monthly and 90-minute annual function. The front-mounted control panel includes 5 LED indicators, a 2-line 20-character LCD 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. Standard RS232 diagnostic interface.

**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

**OPTIONAL FEATURES**

Output Circuit Breakers, Output Trip Alarms, 20 Years Sealed Batteries, 12 Hours Fast Recharge, Internal/External Maintenance Bypass Switch, Remote Meter Panel, Remote Summary Alarm Panel, Summary Alarm Dry Form C Contact, Inverter on Dry Contacts, Fax/Modem, Bypass Relays, Auto Dialer, Seismic Mounting.

**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 6 months from ship date in order to validate warranty.

2-Consult factory for other type batteries than the standard one.

**ELECTRICAL INPUT**

Voltage	120 or 277VAC 1-phase 2-wire +10% - 15%. Contact factory for all other voltages
Input Power Walk-In	Limiting inrush current to less than 125%, 10 times for 1 line cycle
Input Frequency	60Hz, +/-3%, 50Hz available upon request
Protection	Input circuit breaker
Harmonic Distortion	<10%
Power Factor	0.5 lag/lead

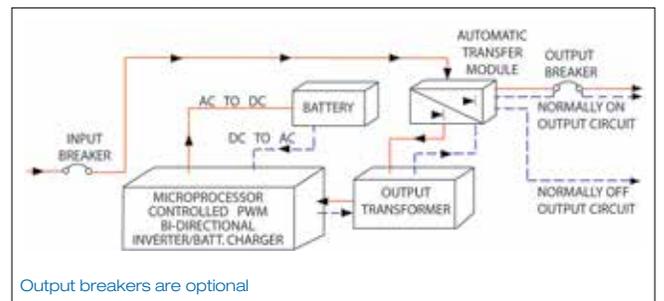
**ELECTRICAL OUTPUT**

Voltage	120 or 277VAC 1-phase 2-wire. Contact factory for all other voltages.
Static Voltage	Load current change +/-2%, battery discharge +/-12.5%
Dynamic Voltage	+/-2% for +/-25% 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
Inverter Overload	115% for 10 minutes, 150% for 16 line cycles
Protection	Optional Distribution Circuit Breaker
Crest Factor	2.8

**ENVIRONMENTAL CONDITIONS**

Storage/Transport	<ul style="list-style-type: none"> <li>• -4°F to 158°F (-20°C to 70°C) without batteries</li> <li>• 0°F to 104°F (-18°C to 40°C) with batteries (max. 3 months at 104° F (40° C))</li> </ul>
Operating Temperature	System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is 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	Audible noise 45 dBA @ 1m from surface in emergency mode

**SINGLE LINE DIAGRAM**



Characteristics, specifications or dimensions subject to change without notice.



TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 NOTES: \_\_\_\_\_

# Emerg-Power Systems FTC Single Phase Series

### Features

- 98% efficient at full load
- PWM/IGBT technology
- Self-testing/Self-diagnostic
- User programmable with password protection
- Standard input circuit breaker
- RS232 communication port
- Micro-processor controlled
- Automatic event and alarm log
- 90 min. standard run time
- Generator compatibility
- Electronic and magnetic ballast compatible
- Custom voltages available
- Automatic event, test and alarm log
- LCD display
- Reduced footprint (stackable cabinets)
- Maintenance free standard batteries
- Forced air cooling during emergency mode only

UL listed to UL924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.

### Electrical/Mechanical Characteristics<sup>4</sup>

(Data provided for standard Lead Calcium batteries)<sup>1,4</sup>

POWER RATING <sup>1</sup> KVA= KW	EFFIC. AT FULL LOAD %	MAX. INPUT CURRENT (A)		HEAT LOSS IN NORMAL MODE (BTU/HR)	BATT. VDC	BATT. A	NO. OF BATT.	UPS CABINET DIMENSIONS			BATTERY CABINET DIMENSIONS <sup>2,3</sup>			NO. OF BATT CAB.	BATT. CAB. WEIGHT LBS (EMPTY)	UPS CAB. WEIGHT LBS	BATT. WEIGHT LBS	TOTAL SYSTEM WEIGHT LBS
		120V	277V					W"	H"	D"	W"	H"	D"					
1.5	98	16	7	102	48	39	4	30	47	25	NA	NA	NA	NA	250 lbs	296 lbs	546 lbs	
2.25	98	24	11	153	72	38	6	30	47	25	NA	NA	NA	NA	265 lbs	444 lbs	709 lbs	
3	98	32	14	204	96	38	8	30	47	25	NA	NA	NA	NA	295 lbs	592 lbs	887 lbs	
3.75	98	39	17	255	120	37	10	30	47	25	NA	NA	NA	NA	305 lbs	740 lbs	1045 lbs	
5	98	50	22	340	144	40	12	30	47	25	NA	NA	NA	NA	315 lbs	888 lbs	1203 lbs	
6	98	63	27	408	180	40	15	30	47	25	30	47	25	1	210 lbs	350 lbs	1110 lbs	
8	98	84	36	544	240	39	20	30	47	25	30	47	25	1	232 lbs	375 lbs	1480 lbs	
10	98	105	45	680	144	82	24	30	47	25	30	47	25	2	420 lbs	435 lbs	1776 lbs	
12.5	98	131	57	850	180	82	30	30	47	25	30	47	25	2	420 lbs	465 lbs	2220 lbs	
16.7	98	174	76	1136	240	80	40	30	47	25	30	47	25	2	464 lbs	530 lbs	2960 lbs	

<sup>1</sup> Consult factory for 20 year type batteries or for wet nickel cadmium batteries.  
<sup>2</sup> Batteries are installed in the electronics cabinet for 1.5 to 5kVA systems

<sup>3</sup> Battery cabinets are stackable. To be installed on the right side of the electronics cabinet  
<sup>4</sup> Special voltages or batteries may change the size, weight or number of cabinets

### How to Order

INPUT VOLTAGE*	BATTERY TYPE	VA/W RATING	SYSTEM TYPE	OUTPUT VOLTAGE*	RUN TIME*	INPUT BREAKER	RS232 PORT	OUTPUT BREAKERS*	OPTIONS*
120 208 240 277	SG= Sealed Lead-Calcium NC= Wet Nickel-Cadmium	1500 2250 3000 3750 5000 6000 8000 10000 12500 16700	-FTC	-120 -277 -208 -120/140 -120/277	-90	-ICB	-RS232	OCBxxxx= no trip alarm* OCAxxxx= with trip alarm*	-20Y= 20 yr sealed batteries -12HR= 12 hr fast recharge -MBYP= internal bypass switch -EMBP= external bypass switch** -RMP= remote metering panel -RSAP= remote summary alarm panel -DCS= dry summary alarm contacts -INVON= inverter on dry contacts -NOFF= normally OFF output*** -MOD= external modem -FAX= fax modem -BPR= bypass relays -DIAL= autodialer -SEIS= seismic mounting -ZONEM= zone monitoring -BATM= battery cycle warranty monitor
* Special voltages may change the size, weight or number of cabinets				* Special voltages may change the size, weight or number of cabinets	* Other run times available			* Max. 12 unsupervised single pole positions or 8 with trip alarm. For more output breakers please consult factory. See page 131 for output breakers option details.	* See page 131 for options description ** External bypass switch is not compatible with integrated output circuit breakers. Input/output voltage has to be the same. *** Normally off loads cannot exceed 20% of total KVA rating with any combination of H.I.D. loads

Example: 277SG6000-FTC-277-90-ICB-RS232-OCB0420-DCS-20Y

TYPE: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

NOTES: \_\_\_\_\_



# Uninterruptible Emergency Lighting Inverter System 1.5KVA -16.7KVA

## System Specifications

### GENERAL

Design	Stand-by, PWM inverter type utilizing IGBT technology with 2ms transfer time
Control	<ul style="list-style-type: none"> <li>Microprocessor controlled , 2 x 20-character display with touch pad controls &amp; functions</li> <li>5 LED indicators &amp; alarm with ring-back feature</li> </ul>
Metering	Input & Output Voltage, Battery Voltage, Battery & Output Current, Output VA, Temperature, Inverter Wattage
Communications	RS-232 port (DB9)

### ELECTRICAL INPUT

Voltage	120 or 277VAC 1-phase 2-wire +10% - 15%. Contact factory for all other voltages
Input Power Walk-In	Limiting inrush current to less than 125%, 10 times for 1 line cycle
Input Frequency	60Hz, +/-3%, 50Hz available upon request
Protection	Input Circuit Breaker
Harmonic Distortion	<10%
Power Factor	0.5 lag/lead

### ELECTRICAL OUTPUT

Voltage	120 or 277VAC 1-phase 2-wire. Contact factory for all other voltages.
Static Voltage	Load current change +/-2%, battery discharge +/-12.5%
Dynamic Voltage	+/-2% for +/-25% 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
Inverter Overload	115% for 10 minutes, 125% for 5 minutes, 150% for 12 cycles
Protection	Optional Distribution Circuit Breakers
Crest Factor	2.8

### ENVIRONMENTAL CONDITIONS

Storage/Transport	<ul style="list-style-type: none"> <li>-4°F to 158°F (-20°C to 70°C) without batteries</li> <li>0°F to 104°F (-18°C to 40°C) with batteries (max. 3 months at 104° F (40° C)</li> </ul>
Operating Temperature	System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is 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	Audible noise 45 dBA @ 1m from surface in emergency mode

### CABINETS

Modular design, freestanding NEMA Type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design through hinged lockable doors requires only 39" front clearance and 12" top clearance. Cabinets are stackable if required to further reduce the footprint. 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 12 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 standard with 10 year, maintenance free, sealed valve regulated, front terminals Lead Calcium batteries. 20 year sealed Lead Calcium or wet Nickel Cadmium batteries also available. 90 min. standard discharge time at full load under normal operating temperature. Low Voltage Disconnect protection included. No special ventilation required.

### SELF-DIAGNOSTICS

Automatic self tests consist of a 5-minute monthly and 90-minute annual function. The front-mounted control panel includes 5 LED indicators, a 2-line 20-character LCD display, and a keypad to control and monitor the internal operation of the system. This control panel allows the operator to easily "watch" system functions as they occur and check on virtually any aspect of the system's operation. Standard RS232 diagnostic interface.

### 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

### OPTIONAL FEATURES

Output Circuit Breakers, Output Trip Alarms, 20 Years Sealed Batteries, 12 Hours Fast Recharge, Internal/External Maintenance Bypass Switch, Remote Meter Panel, Remote Summary Alarm Panel, Summary Alarm Dry Form C Contact, Inverter on Dry Contacts, Normally OFF output, Fax/Modem, Bypass Relays, Auto Dialer, Seismic Mounting.

### FACTORY START-UP

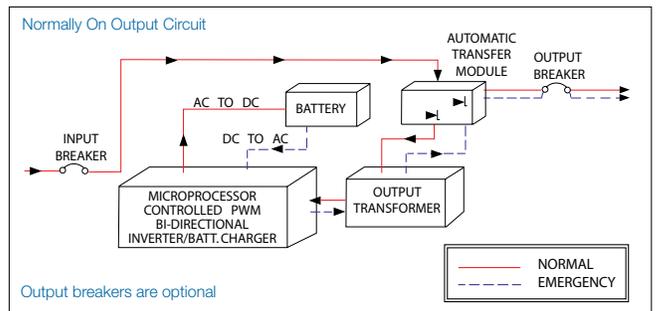
Includes one additional year of warranty. See warranty conditions.

### 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 6 months from ship date in order to validate warranty.

2-Consult factory for other type batteries than the standard one.

### SINGLE LINE DIAGRAM





TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

# Emerg-Power Systems

## 3FTC Three Phase Series

### Features

- 98% efficient at full load
  - PWM/IGBT technology
  - Self-testing/Self-diagnostic
  - User programmable with password protection
  - Standard input circuit breaker
  - Standard internal bypass switch
  - RS232 communication port
  - Micro-processor controlled
  - Automatic event and alarm log
  - 90 min. standard run time
  - Generator compatibility
  - Available in Y or Δ input configuration
  - Custom voltages available
  - Automatic event, test and alarm log
  - LCD display
  - Reduced footprint
  - Maintenance free standard batteries
  - Forced air cooling during emergency only
- UL listed to UL924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.

### Electrical/Mechanical Characteristics<sup>4</sup>

(Data provided for standard Lead Calcium batteries)<sup>1,4</sup>

POWER RATING <sup>1</sup> KVA= KW	EFFIC. AT FULL LOAD %	MAX. INPUT CURRENT (A)		HEAT LOSS IN NORMAL MODE (BTU/HR)	BATT. VDC	BATT. A	NO. OF BATT.	UPS CABINET DIMENSIONS			BATTERY CABINET DIMENSIONS <sup>3</sup>			NO. OF BATT CAB.	BATT. CAB. WEIGHT LBS (EMPTY)	UPS CAB. WEIGHT LBS	BATT. WEIGHT LBS	TOTAL SYSTEM WEIGHT LBS
		120V/ 208V	277V/ 480V					W"	H"	D"	W"	H"	D"					
4.8	98	17	7	326	144	39	12	30	47	25	30	47	25	1	NA	535	888	1633
6	98	21	9	408	180	39	15	30	47	25	30	47	25	1	NA	535	1110	1855
8	98	28	12	544	240	39	20	30	47	25	30	47	25	1	NA	535	1480	2247
10	98	35	15	680	144	81	24	30	47	25	30	47	25	2	NA	639	1776	2835
12.5	98	43	19	850	180	81	30	30	47	25	30	47	25	2	NA	639	2220	3279
16.7	98	58	25	1136	240	81	40	30	47	25	30	47	25	2	210 lbs	639	2960	4063
24	98	84	36	1632	240	117	60	48	72	31	48	72	31	1	232 lbs	1250	4440	6390
33	98	115	50	2244	240	160	40	48	72	31	48	72	31	2	420 lbs	1250	6080	8630
40	98	139	60	2720	240	194	100	48	72	31	48	72	31	2	420 lbs	1450	7400	10150
50	98	174	75	3400	240	243	60	48	72	31	48	72	31	2	464 lbs	1450	9120	11980

<sup>1</sup> Consult factory for 20 year type batteries or for wet Nickel-Cadmium batteries.  
<sup>2</sup> KVA=KW  
<sup>3</sup> Battery cabinets up to 16.7KVA are stackable. To be installed on the right side of the electronics cabinet  
<sup>4</sup> Special voltages or batteries may change the size, weight or number of cabinets

### How to Order

INPUT VOLTAGE*	BATTERY TYPE	VA/W RATING	SYSTEM TYPE	OUTPUT VOLTAGE*	RUN TIME*	INPUT BREAKER	RS232 PORT	INTERNAL BYPASS SWITCH	OUTPUT BREAKERS*	OPTIONS*
120/208 277/480	SG= Sealed Lead-Calcium NC= Wet Ni-Cd	4800 6000 8000 10000 12500 16700 24000 33000 40000 50000	-3FTC	120/208 277/480	90	ICB	RS232	MBYP	OCBxxxx= no trip alarm* OCAxxxx= with trip alarm*	-20Y= 20 yr sealed batteries -12HR= 12 hr fast recharge -NOFF= normally off output 1PH** -EMBP= external bypass switch*** -RMP= remote metering panel -RSAP= remote summary alarm panel -DCS= dry summary alarm contacts -INVON= inverter on dry contacts -NOFF3= normally OFF output 3PH** -MOD= external modem -FAX= fax modem -BPR= bypass relays -DIAL= autodialer -SEIS= seismic mounting -ZONEM= zone monitoring -BATM= battery cycle warranty monitor
* Special voltages may change the size, weight or number of cabinets				* Special voltages may change the size, weight or number of cabinets	* Other run times available				<sup>4</sup> Max. 12 unsupervised single pole positions or 8 with trip alarm, up to 16.7kVA systems. 24 unsupervised or 16 with trip alarm for systems 24kVA to 50kVA. For more output breakers please consult factory. See page 131 for output breakers option details.	* See page 131 for options description ** External bypass switch is not compatible with integrated output circuit breakers. Input/output voltage has to be the same. *** Normally off loads cannot exceed 20% of total KVA rating with any combination of H.I.D. loads

Example: 277SG6000-FTC-277-90-ICB-RS232-OCB0420-DCS-20Y

TYPE: _____
CATALOG #: _____
NOTES: _____



## Uninterruptible Emergency Lighting Inverter System 4.8KVA – 50KVA

### System Specifications

#### GENERAL

Design	Stand-by, PWM inverter type utilizing IGBT technology with 2ms transfer time
Control	<ul style="list-style-type: none"> <li>Microprocessor controlled , 2 x 20-character display with touch pad controls &amp; functions</li> <li>5 LED indicators &amp; alarm with ring-back feature</li> </ul>
Metering	Input & Output Voltage, Battery Voltage, Battery & Output Current, Output VA, Temperature, Inverter Wattage
Communications	RS-232 port (DB9)

#### ELECTRICAL INPUT

Voltage	120/208 or 277/480 3 phase 4-wire +10% - 15%. Contact factory for all other voltages
Input Power Walk-In	Limiting inrush current to less than 125%, 10 times for 1 line cycle
Input Frequency	60Hz, +/-3%, 50Hz available upon request
Protection	Input Circuit Breaker
Harmonic Distortion	<10%
Power Factor	0.5 lag/lead

#### ELECTRICAL OUTPUT

Voltage	120/208 or 277/480VAC 3-phase 4-wire Contact factory for all other voltages.
Static Voltage	Load current change +/-4%, battery discharge +/-4%
Dynamic Voltage	+/-3% for +/-25% load step change +/-6% 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
Inverter Overload	115% for 5 minutes, 125% for 10 minutes, 280% for line cycles
Protection	Optional Distribution Circuit Breakers
Crest Factor	2.8

#### ENVIRONMENTAL CONDITIONS

Storage/Transport	-4°F to 158°F (-20°C to 70°C) without batteries (max. 3 months at 104° F (40° C) -0°F to 104°F (-18°C to 40°C) with batteries
Operating Temperature	System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is 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	45 dBA @ 1m from surface in emergency mode

#### CABINETS

Modular design, freestanding NEMA Type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design through hinged lockable doors requires only 39" front clearance and 12" top clearance. Cabinets are stackable up to 16.7kVA, if required to further reduce the footprint. Top and left side conduit entry with knockouts up to 16.7kVA. Left side only for 24kVA and up.

#### 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 12 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 standard with 10 year, maintenance free, sealed valve regulated, front terminals lead calcium batteries. 20 year sealed Lead Calcium or wet Nickel Cadmium batteries also available. 90 min. standard discharge time at full load under normal operating temperature. Low Voltage Disconnect protection included. No special ventilation or filters required

#### SUPERVISION

Automatic self tests consist of a 5-minute monthly and 90-minute annual function. The front-mounted control panel includes 5 LED indicators, a 2-line 20-character LCD 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. Standard RS232 diagnostic interface.

#### 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.

#### OPTIONAL FEATURES

Output Circuit Breakers, Output Trip Alarms, 20 Years Sealed Batteries, 12 Hours Fast Recharge, External Maintenance Bypass Switch, Remote Meter Panel, Remote Summary Alarm Panel, Summary Alarm Dry Form C Contact, Inverter on Dry Contacts, Normally OFF output, Fax/Modem, Bypass Relays, Auto Dialer, Seismic Mounting.

#### FACTORY START-UP

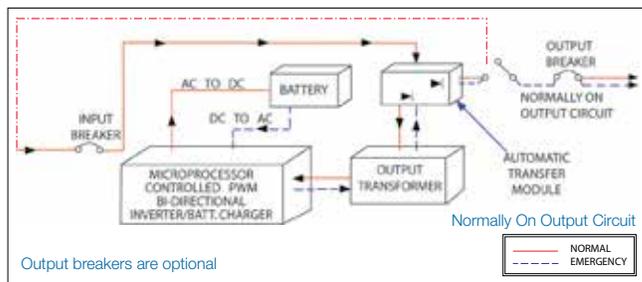
Includes one additional year of warranty. See warranty conditions.

#### 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 6 months from ship date in order to validate warranty.

2- Consult factory for other type batteries than the standard one.

#### SINGLE LINE DIAGRAM



Characteristics, specifications or dimensions subject to change without notice.



TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

# Emerg-Power Systems FTC3R & 3FTC3R Outdoor Uninterruptible Emergency Lighting Inverter System 3KVA-8KVA

## Features

- 98% efficient at full load
- PWM/IGBT technology
- Self-testing/Self-diagnostic
- Standard input circuit breaker
- Standard internal bypass switch
- RS232 communication port
- Standard seismic zone 4 brackets
- Standard summary dry contacts
- Automatic event and alarm log
- NEMA 3R cabinet for outdoors
- 90 min. standard run time
- Generator compatibility
- Custom voltages available
- Automatic event, test and alarm log
- LCD display
- One size cabinet
- Maintenance free standard 5 year batteries
- Temperature controlled cooling fans

## 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 6 months from ship date in order to validate warranty.

## Electrical/Mechanical Characteristics<sup>3, 4</sup>

UL listed to UL924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.

POWER RATING KVA= KW	EFFIC. AT FULL LOAD %	HEAT LOSS (BTU)	BATT. VDC	BATT. A	NO. OF BATT. <sup>2</sup>	UPS CABINET DIMENSIONS			UPS CAB. WEIGHT LBS	BATT. CAB. WEIGHT LBS	TOTAL SYSTEM WEIGHT LBS
						W" <sup>1</sup>	H"	D"			
3 (1PH)	98	255	120	37	10	48	76	30	535 lbs	888 lbs	1633 lbs
4 (1PH)	98	340	144	40	12	48	76	30	535 lbs	1110 lbs	1855 lbs
5 (1PH)	98	408	180	40	15	48	76	30	535 lbs	1480 lbs	2247 lbs
6.5 (1PH)	98	544	240	39	20	48	76	30	639 lbs	1776 lbs	2835 lbs
8 (1PH)	98	680	144	82	24	48	76	30	639 lbs	2220 lbs	3279 lbs
4 (3PH)	98	326	144	39	12	48	76	30	639 lbs	2960 lbs	4063 lbs
5 (3PH)	98	408	180	39	15	48	76	30	1250 lbs	4440 lbs	6390 lbs
6.5 (3PH)	98	544	240	39	20	48	76	30	1250 lbs	6080 lbs	8630 lbs
8 (3PH)	98	680	144	81	24	48	76	30	1450 lbs	7400 lbs	10150 lbs

<sup>1</sup> Factory installed floor mount brackets; add 2.5" to each side (total 53")

<sup>2</sup> Standard batteries are 5 year life expectancy. Batteries are installed in the same cabinet with electronics

<sup>3</sup> UL rated for 90 min. run time for temperatures: 50°F to 104°F (10°C to 40°C) or -4°F to 104°F (-20°C to 40°C) with optional heater

<sup>4</sup> NEMA type 3R, freestanding, two-door powder coat cold rolled steel cabinet standard. Stainless steel enclosure is optional

## How to Order

INPUT VOLTAGE*	BATTERY TYPE	VA/W RATING*	SYSTEM TYPE	OUTPUT VOLTAGE*	RUN TIME*	INPUT BREAKER	RS232 PORT	INTERNAL BYPASS SWITCH	OUTPUT BREAKERS*	OPTIONS*
120, 1PH 208, 1PH 240, 1PH 277, 1PH 120/208, 3PH 277/480, 3PH	SG= Sealed Lead-Calcium	3000 4000 5000 6500 8000	FTC3R= single phase 3FTC3R= 3 phase	120 208 277 120/208 277/480	90	ICB	RS232	MBYB	OCBxxxx= no trip alarm* OCAxxxx= with trip alarm*	10Y= 10 yr sealed batteries 12HR= 12 hr fast recharge NOFF= normally off output** EMBP= external bypass switch*** RMP= remote metering panel RSAP= remote summary alarm panel HTR= heater INVON= inverter on dry contacts MOD= external modem FAX= fax modem BPR= bypass relays SS= stainless steel enclosure
* 1PH are input voltages available for 1 phase systems. 3PH are input voltages available for 3phase systems.		** Not available in 3 phase version		* 1PH are input voltages available for 1 phase systems. 3PH are input voltages available for 3phase systems.	* Other run times available				* Max. 14 unsupervised single pole positions or 8 with trip alarm. For more output breakers please consult factory. See page 131 for output breakers option details.	* See page 131 for options description Summary alarm dry contacts and seismic brackets are standard. ** Normally off loads cannot exceed 20% of total KVA rating with any combination of H.I.D. loads *** Not available in 3 phase version.

Example: 120SG4000-FTC3R-120-90-ICB-RS232-MBYB-OCB0420-10Y

# EMERG-POWER SYSTEMS

## Option Details

### INTEGRATED OUTPUT CIRCUIT BREAKERS:

-OCB	12	20	20	20	20
<b>Trip Alarm</b> OCB - No Breaker Trip Alarm OCA - With Breaker Trip Alarm	<b>Number of Circuit Breakers</b> Combination of 1 pole, 2 pole and 3 pole breakers available.  * For max. number of circuit breakers available please consult factory	<b>Breaker Rating (Amps)</b>  * Various ratings available	<b>Number of poles</b> Blank - 1 pole -2P - 2 poles -3P - 3 poles	<b>Breaker Voltage</b> Blank- matches system output voltage  -120VAC -208VAC -240VAC -277VAC -480VAC	<b>Operation Mode</b> Blank: Normally-On -NOFF: Normally-Off

Distribution circuit breakers are for output load protection. Protection for the normally on and/or for the normally off loads. All circuit breakers are rated for 10,000 AIC.

If ordered, an audible and visual alarm activates when an output distribution circuit breaker is open or has tripped.

#### (-20YR) 20 YEAR SEALED LEAD CALCIUM BATTERIES

Maintenance free battery requires no addition of water over the life of the battery. The battery cells are housed in protective, modular steel trays. Life expectancy is designed for 20-years at 77°F (25°C).

#### (-12HR) 12 HOUR FAST RECHARGE

Battery charger upgrade option which decreases the time required to return a fully discharged battery to the fully charged state. The normal 24 hour recharge cycle is reduced to a 12 hour period.

#### (-MBYP) INTERNAL MAINTENANCE BYPASS SWITCH

Internally mounted device permits maintenance personnel to easily bypass the protected equipment directly to the AC utility power. The manual make before break switch isolates the system to perform routine maintenance or servicing without interruption of utility power to the connected load.

#### (-EMBP) EXTERNAL MAINTENANCE BYPASS SWITCH

The external maintenance bypass switch is mounted in a 20"H x 16"W x 9"D NEMA 1 separate enclosure, used to completely isolate the inverter system from the connected load and AC utility input. This option allows the system to be safely powered down for maintenance or service. The option may not be used on systems with more than one single pole output circuit breaker which must be sized for the total system output current.

#### (-RMP) REMOTE METER PANEL

The panel allows monitoring of parameters and control from remote locations up to 150 feet away from the inverter system. Also, the remote panel provides a complete touch pad interface allowing the user to monitor, control and program the inverter system.

#### (-RSAP) REMOTE SUMMARY ALARM PANEL

Wall mountable box provides visual and audible alarms with silent switch. The panel consists of LED indicators and built-in audible alarm and may be located up to 1,000 feet away from the inverter system.

#### (-DCS) SUMMARY ALARM DRY CONTACTS

Form C dry contacts for remote monitoring purposes. Rated at 5 amps max. (250VAC/30VDC), the contacts will change state when any of the following alarms: are tripped High/Low Battery Charger Voltage, High/Low AC Input Voltage, Near Low Battery Voltage, Low Battery Voltage, Load Reduction Fault, High Ambient Temperature, Inverter Fault, Output Fault, Output Overload or Optional circuit breaker.

#### (-INVON) INVERTER ON DRY CONTACTS

Form C dry contacts that will change state when the system transfers to battery operation

#### (-VTD) VARIABLE TIME DELAY (FOR NORMALLY OFF CIRCUITS)

After a return of AC utility power, delays retransfer of the inverter for up to 15 min. and continues to supply emergency power to the normally off circuits.

#### (-NOFF) NORMALLY OFF OUTPUT

This output circuit is dedicated for the "emergency only" equipment. Emergency only equipment operates during power outages and when the system is on battery back up. This option leaves the normally off load circuits off during normal utility power conditions. A 1-pole circuit breaker is provided. For 3 phase systems, 3 pole normally off circuits are available as well.

#### (-MOD) EXTERNAL MODEM

External modem device is designed to boost the signal level of the RS-232 diagnostic interface to remote monitoring locations located more than 100 feet away from the system.

#### (-FAX) INTERNAL FAX MODEM

The internal fax modem enables the system to send a fax automatically to several pre-programmed numbers when one of the following conditions occurs: utility failure, output failure or any alarm. The Fax Modem option requires a user supplied dedicated phone line.

#### (-BPR) BYPASS RELAYS

Internal bypass relays will allow overriding circuits that can be switched on/off, so in case of a power failure the emergency circuits will be supplied from the inverter system whatever the position of the switching device. Please consult factory for more details.

#### (-DIAL) AUTO DIALER

The Auto Dialer modem option automatically dials up to four user-programmable phone numbers in the event of any system alarm condition. The option is designed to deliver a predetermined digital or audible message when activated. The Auto Dialer option requires a user supplied dedicated digital or analog phone line.

#### (-SEIS) SEISMIC MOUNTING KIT

The seismic mounting kit option is designed to prevent system movement during seismic events. Heavy-duty brackets are provided to secure system cabinetry to floor surfaces. Meets Zone 4 requirements.

#### (-ZONEM) ZONE MONITORING

Allows voltage monitoring of different circuits than the standard AC utility input. When the voltage of one of these circuits drops, the inverter system will go into battery back-up operation mode. Number and voltage of the monitored circuits to be specified.

#### (-RS232) DIAGNOSTIC INTERFACE

A microprocessor-based data acquisition system designed to monitor all the system parameters remotely. Monitors alarm log, event log and automatic test log. User can command the system to perform a battery test and review all system parameters. Access is through a DB9 connector and transmits at 9600 baud.

#### (-BATM) BATTERY CYCLE WARRANTY MONITOR

Device providing battery monitoring at string level or cell level. Please consult factory for more details.

# EMERG-POWER SYSTEMS

## Control Panel & Display

### Meter Functions

- AC Voltage Input
- AC Voltage Output
- AC Current output
- Battery Voltage
- Battery Current
- VA Output
- Inverter Watts
- Ambient Temperature
- System Days (cumulative)
- Inverter Minutes (cumulative)

### Program Functions

- Set Date
- Set Time
- Set Monthly Test Date and Time
- Set Annual Test Date and Time
- Set Load Fault Reduction Setting
- Set Low Battery Alarm
- Set Near Low Battery Alarm
- Set Low AC Voltage Alarm
- Set High AC Alarm
- Set Ambient Temperature Alarm

### Alarms

- High Battery Charger Voltage
- Low Battery Charger Voltage
- High AC Input Voltage
- Low AC Input Voltage
- Near Low Battery Voltage
- Low Battery Voltage
- Load Reduction Fault
- High Ambient Temperature
- Inverter Fault
- Output Fault
- Output Overload

### Control Functions

- Test and Event Logs (75 logs stored) Logs record the following data: Date, Time, Duration, Output Voltage, Output Current, Ambient Temperature and Alarms Present.
- Alarm Logs (50 logs stored) Logs record the following data: Date, Time and Alarm type
- Buzzer On/Off (toggle)
- 5 LED Indicators and Alarms with Ringback Feature



### System Testing

Manual tests of system may be performed at any time using the control panel test key. Automatic self-diagnostic tests consist of a 5-minute monthly and 90-minute annual function (the user can program the date and time of day the test is to take place). The microprocessor automatically records the last 75 test events in its own separate test result log.

# EMERG-POWER SYSTEMS

## Central Systems Request Data

### 1) Input voltage

**Single phase** (2 wire + ground) 120VAC  208VAC  240VAC  277VAC

**Three phase** (4 wire + ground, Y) 120/208VAC  277/480VAC  347/600VAC

**Three phase** (3 wire + ground, Δ) 208VAC  480VAC  600VAC

### 2) Output voltage

**Single phase** (2 wire + ground) 120VAC  208VAC  277VAC

**Single phase** (3 wire + ground) 120/240VAC  120/277VAC

**Three phase** (4 wire + ground, Y) 120/208VAC  277/480VAC

### 3) System capacity

KVA rating: \_\_\_\_\_ System Series Type: \_\_\_\_\_

- a) Please consider power consumption and maximum current of the complete lamp fixture not just the lamp wattage (ie: ballasts consumption)
- b) Please consider loads power factor
- c) Even if the systems can run with 100% load, it is recommended as standard practice to use a system with a capacity at least 10% over maximum connected load

### 4) Type of loads

Incandescent  Fluorescent  H.I.D (metal halide, high pressure sodium, etc.)

Other \_\_\_\_\_

### 5) Mode of operation

Normally ON (24/7)  Normally OFF (emergency only)  Switched loads ON/OFF  LED

Please consider internal bypass relays or external override relays for switched On/Off loads.  
Each switched output circuit will require a bypass relay. Maximum 20 A per circuit.

### 6) Integrated output circuit breakers

# of CB \_\_\_\_\_ Amps \_\_\_\_\_ Voltage \_\_\_\_\_ # of poles \_\_\_\_\_ NON  NOFF  Trip alarm

# of CB \_\_\_\_\_ Amps \_\_\_\_\_ Voltage \_\_\_\_\_ # of poles \_\_\_\_\_ NON  NOFF  Trip alarm

### 7) Type of Batteries (check availability for each type system)

10 yr sealed lead calcium  20 yr sealed lead calcium  wet nickel cadmium

### 8) Options (refer to available options for each system type)

(12HR-) 12 Hour Fast Recharge  RS232- diagnostic interface  ZONEM- zone monitoring

MBYP- internal bypass switch  NOFF – normally OFF output  VTD- variable time delay

EMBP- external bypass switch  MOD- external modem  BATM – battery cycle warranty monitor

RMP- remote metering panel  FAX- fax modem

RSAP- remote summary alarm panel  BPR- bypass relays How many \_\_\_\_\_

DCS- dry summary alarm contacts  DIAL- auto-dialer

INVON- inverter on dry contacts  SEIS- seismic mounting kit



ACCESSORIES

& GENERAL



INFORMATION

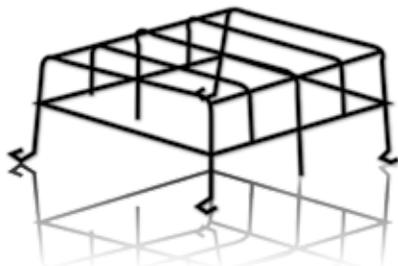
# ACCESSORIES & GENERAL INFORMATION

## Table of Contents

					
Wire Guards	Accessories	Lamp Data	Wire Size Guard	National Electrical Code	Life Safety Code
<b>P. 136-137</b>	<b>P. 138-139</b>	<b>P. 140-141</b>	<b>P. 142</b>	<b>P. 143-145</b>	<b>P. 146-149</b>


Product Index
<b>P. 152</b>



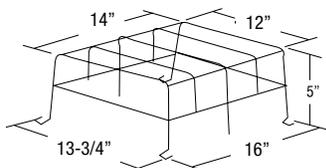
TYPE: _____
CATALOG #: _____
NOTES: _____

## Wire Guards

### Catalog Number WG1-E

#### Application

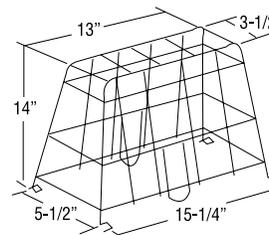
- JS Series (small cabinet)
- Premier™ Battery Unit
- Premier™ Exit Sign (wall mount)
- Prestige™ DX Series
- Preceptor™ Die-Cast Series
- Prestige™ Thin Die-Cast Series



### Catalog Number WG5-E

#### Application

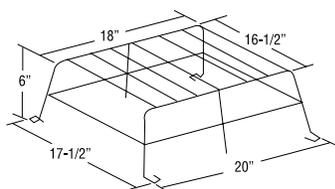
- X10 (end or ceiling mounted) AC and AC/DC or Self-Powered exit with no mounted heads
- ECL & ECLXN Series LED (end or ceiling mounted) AC and AC/DC or Self-Powered
- Preceptor™ Series LED (AC and AC/DC or Self-Powered) (end or ceiling mounted)
- Prestige™ DX Series LED and Thin Die-Cast Series (end or ceiling mount)
- Premier™ Exit Sign (end or ceiling mount)



### Catalog Number WG2-E

#### Application

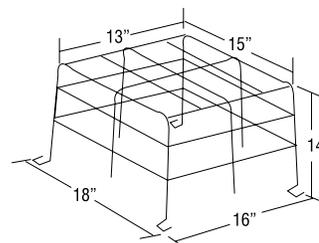
- JS Series (large cabinet)
- All A cabinets
- Premier™ Combo Series (wall mount)



### Catalog Number WG6-E

#### Application

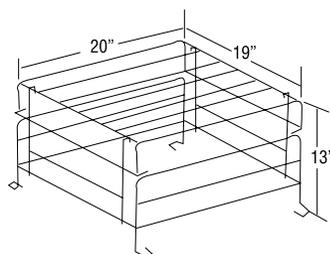
- Single EF23 head
- X10 mini systems (wall mounted) with front mounted EF9 head(s) (wall mounted)
- KS Series with front mounted heads
- RS Series



### Catalog Number WG3-E

#### Application

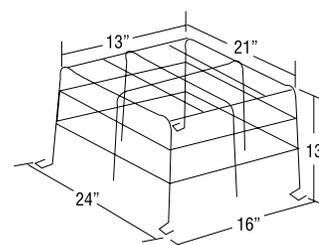
- IL Series
- All B and C cabinets
- KS Series



### Catalog Number WG7-E

#### Application

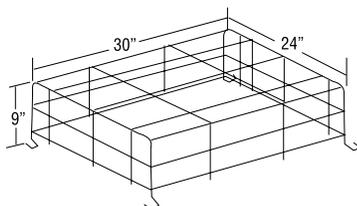
- EF23D heads
- RS Series



### Catalog Number WG4-E

#### Application

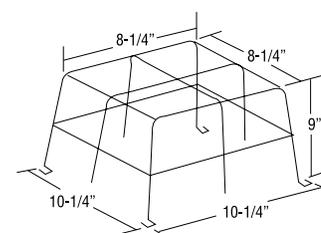
- All D cabinets
- KS Series (not for front mounted heads)



### Catalog Number WG8-E

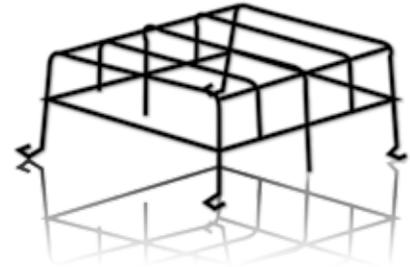
#### Application

- Single remote EF9, EF10, EF11
- EF16, EF18



TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

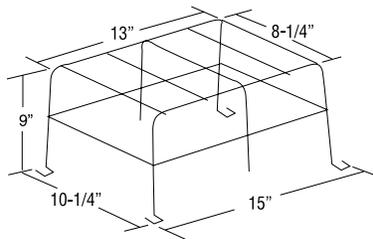
## Wire Guards



### Catalog Number WG9-E

#### Application

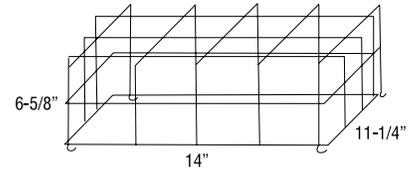
- Double or triple remote EF9, EF11, EF18, lighting heads
- RS Series with EF9 or EF18 heads
- ECS-2 Series



### Catalog Number WG13-E

#### Application

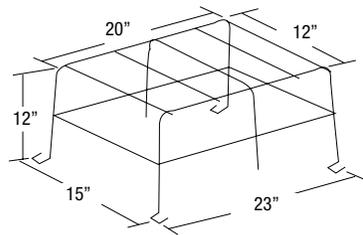
- PRO-2N Series
- Preceptor™ Series Self-Powered (wall mount)



### Catalog Number WG10-E

#### Application

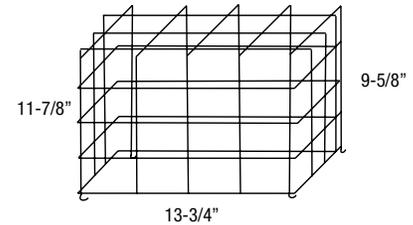
- JS Series with front mounted heads



### Catalog Number WG14-E

#### Application Exit Signs (Ceiling Mount)

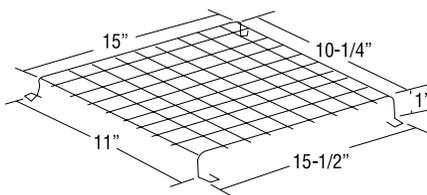
- Prestige™ Floor Proximity Series (6" & 8");
- Preceptor™ Die-Cast Series;
- Prestige™ Thin Die-Cast Series;
- X10 LED Series,
- Premier™ Exit Series;



### Catalog Number WG11-E

#### Application

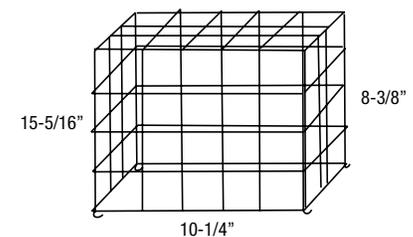
- GS Series
- EF15, EF20, EF21R, EF35 lighting fixtures
- Fully recessed Preceptor™ Series
- Prestige™ Thin Die Cast Exit Sign (wall mounted)



### Catalog Number WG15-E

#### Application Exit Signs (Ceiling Mount)

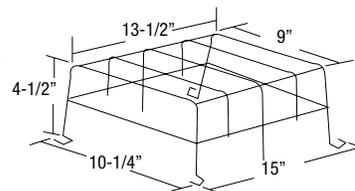
- Prestige™ Floor Proximity Series (6" & 8");
- Preceptor™ Die-Cast Series;
- Prestige™ Thin Die-Cast Series;
- X10 LED Series,
- Premier™ Exit Series;

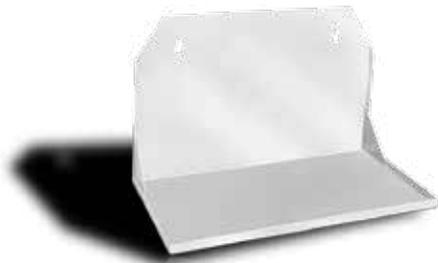


### Catalog Number WG12-E

#### Application

- X10 Series LED (AC and AC/DC or Self-Powered) (wall mount)
- ECL & ECLXN Series LED AC and AC/DC or Self-Powered (wall mount)
- Preceptor™ Series LED (AC and AC/DC or Self-Powered) (wall mount)
- Prestige™ DX Series LED AC and AC/DC or Self-Powered (wall mount)
- Remote EF13, EF14, or EF17 fixtures





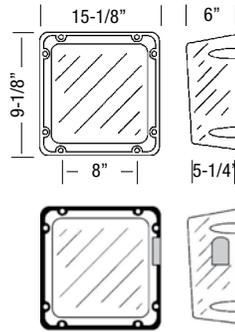
TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_

# Accessories

## Catalog Number VRS or VRS-4X

- Application**
- ME Series with top mounted heads
  - PS Series all mountings
  - X10 LED, (wall mounted) AC and AC/DC or Self-Powered exit with no mounted heads
  - ECL Series LED (wall mounted) AC and AC/DC or Self-Powered
  - Preceptor™ Series LED, (wall mounted) AC and AC/DC

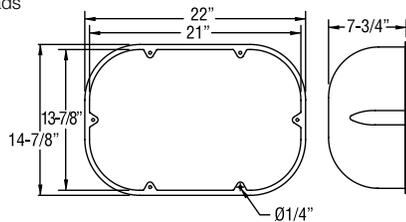
**NEMA-4X**



## Catalog Number VRS-BB or VRSBB-4X

- Application**
- JS Series (small cabinet) top or front mounted heads
  - ECC & ECM Series (small cabinet)

**NEMA-4X**

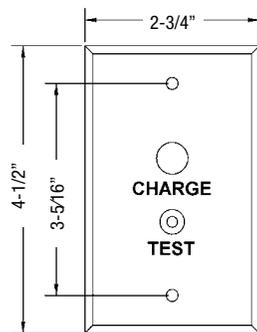


## Remote Test Switch

Make testing your ceiling mounted equipment easier with the remote test switch. Compatible with 120 or 277 VAC circuits, the remote test switch will interrupt the line voltage to your equipment by means of a momentary push button switch. AC on/Charge status indicator lamp assures that power is going to your emergency lighting.

### How To Order

- Metal faceplate, chrome **RTS**
- Plastic Faceplate plastic, off white **RTS-1**

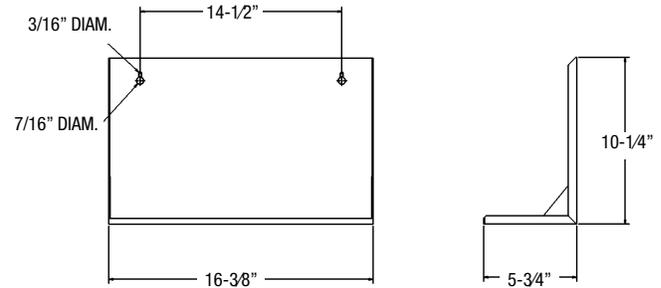


## MP3 Mounting Platform

Constructed of 18 gauge. steel, the MP3 mounting platform will accommodate all our unit equipment in our 'B' cabinet.

### How To Order

- Mounting platform **MP3-EG**
- Mounting platform, gray **MP3-GY**



## MP6, MP12, MP24 Mounting Platform

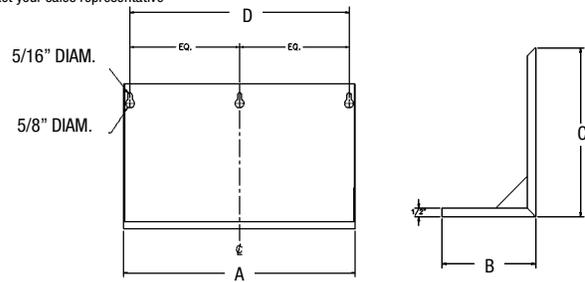
Constructed of 18 gauge. steel, the MP6, MP12, and MP24 mounting platform will accommodate our unit equipment in our 'C', 'D', and 'E' cabinets respectively.

### How To Order

- Mounting platform (off white) **MP6-EG**
- Mounting platform (off white) **MP12**
- Mounting platform (off white) **MP24**

Optional colors available, contact your sales representative

Part #	A	B	C	D
MP6	17"	7.75"	12.25"	16"
MP12	27.5"	7.75"	12.25"	16"
MP24	27.5"	11.63"	12.25"	16"



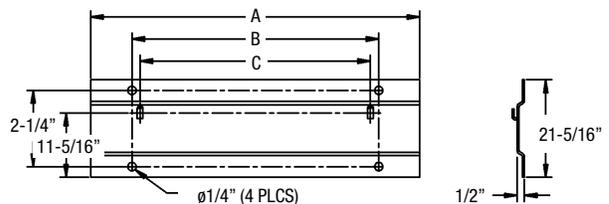
## B1 and B12 Mounting Brackets

Constructed of 16 gauge. steel, the B1 and B2 mounting bracket will accommodate our unit equipment in our 'A' and 'B' cabinets respectively.

### How To Order

- Mounting bracket (off white) **B1**
- Mounting bracket (off white) **B2**

Part #	A	B	C
B1	10"	7"	7 1/2"
B2	14 1/4"	11 3/4"	12 5/8"



TYPE: _____
CATALOG #: _____
NOTES: _____



Specify mounting plate designation as a suffix to fixture type model number. Plates ordered separately, specify plate designation and fixture type.

**230.1238-E & 230.1239-E**

- Single, Double or Triple Round
- Thermoplastic Construction
- Off-white or black finish only
- Mount direct to 4" octagonal box

**Dimensions:** 5" diameter - slotted mounting holes  
3 to 3-9/16" mounting center

**Standard:** EF18, EF18D; and EF9, EF9D

Off-White - 230.1238-E

Black - 230.1239-E

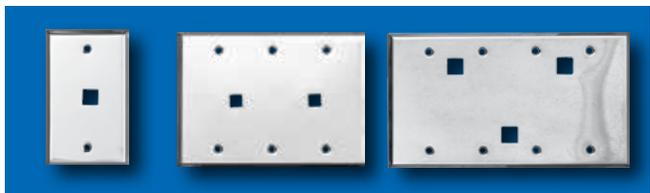
**450.0129-E, 450.0397-E & 450.0398-E**

- Single, double or triple rectangular
- Single, triple or 4-gang steel construction
- Chrome plated finish only
- Mount direct to standard outlet box

**Dimensions:** single - 2-3/4" X 4-1/2" (for 1 fixture)  
3-gang - 6-7/16" X 4-1/2" (for 2 fixtures)  
4-gang - 8-3/8" X 4-1/2" (for 3 fixtures)

**Standard:** EF28, EF28D; EF18T and EF28T

450.0129-E - No Square Hole    450.0397-E - No Square Hole    450.0398-E - No Square Hole  
450.0194-E - 1/2" Square Hole    450.1153-E - 1/2" Square Hole    450.1155-E - 1/2" Square Hole

**330.7583-E & 330.7584-E**

- Single or double round
- Die-cast aluminum construction
- Gasketed weatherproof
- Off-white or black powder paint finish only
- Mount direct to 4" octagonal box

**Dimensions:** 4-1/8" diameter  
3-9/16" mounting center

**Standard:** EF11 and EF11D

Off-White Single    Black Single    Off-White Double    Black Double  
330.7583-E    330.7577-E    330.7584-E    330.7578-E



Gasket - 245.0100-E

**12804-E & 12805-E**

- Single or double rectangular
- Die-cast aluminum construction
- Gasketed weatherproof
- Silver gray enamel finish only
- Mount direct to standard outlet box

**Dimensions:** 4-5/8" X 2-7/8"  
3-1/4" mounting center

**Standard:** Non standard mounting plate

12804-E

12805-E















# Life Safety Code

## 7.8 Illumination of Means of Egress.

### 7.8.1 General.

7.8.1.1\* Illumination of means of egress shall be provided in accordance with Section 7.8 for every building and structure where required in Chapters 11 through 43. For the purposes of this requirement, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of this requirement, exit discharge shall include only designated stairs, aisles, corridors, ramps, escalators, walkways, and exit passageways leading to a public way.

7.8.1.2 Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use, unless otherwise provided in 7.8.1.2.2.

7.8.1.2.1 Artificial lighting shall be employed at such locations and for such periods of time as are necessary to maintain the illumination to the minimum criteria values herein specified.

7.8.1.2.2 Unless prohibited by Chapters 11 through 43, automatic lighting control devices shall be permitted to temporarily turn off the illumination within the means of egress, provided that each lighting control device complies with all of the following:

- (1) In new installations, the lighting control device is listed.
- (2) The lighting control device is equipped to automatically energize the controlled lights upon loss of normal power and is evaluated for this purpose.
- (3) Illumination timers are provided and are set for a minimum 15-minute duration.
- (4) The lighting control device is activated by any occupant movement in the area served by the lighting units.
- (5) In new installations, the lighting control device is activated by activation of the building fire alarm system, if provided.
- (6) The lighting control device does not turn off any lights relied upon for activation of photoluminescent exit signs or path markers.
- (7) The lighting control device does not turn off any battery equipped emergency luminaires, unit equipment, or exit signs.

7.8.1.2.3\* Energy-saving sensors, switches, timers, or controllers shall be approved and shall not compromise the continuity of illumination of the means of egress required by 7.8.1.2.

7.8.1.3\* The floors and other walking surfaces within an exit and within the portions of the exit access and exit discharge designated in 7.8.1.1 shall be illuminated as follows:

- (1) During conditions of stair use, the minimum illumination for new stairs shall be at least 10 ft-candle (108 lux), measured at the walking surfaces.
- (2) The minimum illumination for floors and other walking surfaces, other than new stairs during conditions of stair use, shall be to values of at least 1 ft-candle (10.8 lux), measured at the floor.
- (3) In assembly occupancies, the illumination of the walking surfaces of exit access shall be at least 0.2 ft-candle (2.2 lux) during periods of performances or projections involving directed light.
- (4)\*The minimum illumination requirements shall not apply where operations or processes require low lighting levels.

7.8.1.4\* Required illumination shall be arranged so that the failure of any single lighting unit does not result in an illumination level of less than 0.2 ft-candle (2.2 lux) in any designated area.

7.8.1.5 The equipment or units installed to meet the requirements of Section 7.10 also shall be permitted to serve the function of illumination of means of egress, provided that all requirements of Section 7.8 for such illumination are met.

### 7.8.2 Sources of Illumination.

7.8.2.1\* Illumination of means of egress shall be from a source considered reliable by the authority having jurisdiction.

7.8.2.2 Battery-operated electric lights and other types of portable lamps or lanterns shall not be used for primary illumination of means of egress. Battery-operated electric lights shall be permitted to be used as an emergency source to the extent permitted under Section 7.9.

## 7.9 Emergency Lighting.

### 7.9.1 General.

7.9.1.1\* Emergency lighting facilities for means of egress shall be provided in accordance with Section 7.9 for the following:

- (1) Buildings or structures where required in Chapters 11 through 43
- (2) Underground and limited access structures as addressed in Section 11.7
- (3) High-rise buildings as required by other sections of this Code
- (4) Doors equipped with delayed-egress locks
- (5) Stair shafts and vestibules of smokeproof enclosures, for which the following also apply:
  - (a) The stair shaft and vestibule shall be permitted to include a standby generator that is installed for the smokeproof enclosure mechanical ventilation equipment.
  - (b) The standby generator shall be permitted to be used for the stair shaft and vestibule emergency lighting power supply.
- (6) New access-controlled egress doors in accordance with 7.2.1.6.2.

7.9.1.2 For the purposes of 7.9.1.1, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of 7.9.1.1, exit discharge shall include only designated stairs, ramps, aisles, walkways, and escalators leading to a public way.

7.9.1.3 Where maintenance of illumination depends on changing from one energy source to another, a delay of not more than 10 seconds shall be permitted.

### 7.9.2 Performance of System.

7.9.2.1 Emergency illumination shall be provided for a minimum of 1-1/2 hours in the event of failure of normal lighting.

7.9.2.1.1 Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ft-candle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level.

7.9.2.1.2 Illumination levels shall be permitted to decline to not less than an average of 0.6 ft-candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (0.65 lux) at the end of 1-1/2 hours.

7.9.2.1.3 The maximum-to-minimum illumination shall not exceed a ratio of 40 to 1.

7.9.2.2 New emergency power systems for emergency lighting shall be at least Type 10, Class 1.5, Level 1, in accordance with NFPA110, Standard for Emergency and Standby Power Systems.

7.9.2.3\* The emergency lighting system shall be arranged to provide the required illumination automatically in the event of any interruption of normal lighting due to any of the following:

- (1) Failure of a public utility or other outside electrical power supply
- (2) Opening of a circuit breaker or fuse
- (3) Manual act(s), including accidental opening of a switch controlling normal lighting facilities

7.9.2.4 Emergency generators providing power to emergency lighting systems shall be installed, tested, and maintained in accordance with NFPA 110, Standard for Emergency and Standby Power Systems. Stored electrical energy systems, where required in this Code, other than battery systems for emergency luminaires

in accordance with 7.9.2.5, shall be installed and tested in accordance with NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems.

7.9.2.5 Unit equipment and battery systems for emergency luminaires shall be listed to ANSI/UL 924, Standard for Emergency Lighting and Power Equipment.

# Life Safety Code

**7.9.2.6\*** Existing battery-operated emergency lights shall use only reliable types of rechargeable batteries provided with suitable facilities for maintaining them in properly charged condition. Batteries used in such lights or units shall be approved for their intended use and shall comply with NFPA 70, National Electrical Code.

**7.9.2.7** The emergency lighting system shall be either continuously in operation or shall be capable of repeated automatic operation without manual intervention.

## **7.9.3 Periodic Testing of Emergency Lighting Equipment.**

**7.9.3.1** Required emergency lighting systems shall be tested in accordance with one of the three options offered by 7.9.3.1.1, 7.9.3.1.2, or 7.9.3.1.3.

**7.9.3.1.1** Testing of required emergency lighting systems shall be permitted to be conducted as follows:

- (1) Functional testing shall be conducted monthly, with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds, except as otherwise permitted by 7.9.3.1.1(2).
- (2)\* The test interval shall be permitted to be extended beyond 30 days with the approval of the authority having jurisdiction.
- (3) Functional testing shall be conducted annually for a minimum of 1 1/2 hours if the emergency lighting system is battery powered.
- (4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1(1) and (3).
- (5) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

**7.9.3.1.2** Testing of required emergency lighting systems shall be permitted to be conducted as follows:

- (1) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
- (2) Not less than once every 30 days, self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.
- (3) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.
- (4) A visual inspection shall be performed at intervals not exceeding 30 days.
- (5) Functional testing shall be conducted annually for a minimum of 1-1/2 hours.
- (6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2-hour test.
- (7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

**7.9.3.1.3** Testing of required emergency lighting systems shall be permitted to be conducted as follows:

- (1) Computer-based, self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
- (2) Not less than once every 30 days, emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.
- (3) The emergency lighting equipment shall automatically perform annually a test for a minimum of 1 1/2 hours.
- (4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.3(2) and (3).
- (5) The computer-based system shall be capable of providing a report of the history of tests and failures at all times.

## **7.10 Marking of Means of Egress.**

### **7.10.1 General.**

**7.10.1.1 Where Required.** Means of egress shall be marked in accordance with Section 7.10 where required in Chapters 11 through 43.

### **7.10.1.2 Exits.**

**7.10.1.2.1\* Exits**, other than main exterior exit doors that obviously and clearly are identifiable as exits, shall be marked by an approved sign that is readily visible from any direction of exit access.

### **7.10.1.2.2\***

Horizontal components of the egress path within an exit enclosure shall be marked by approved exit or directional exit signs where the continuation of the egress path is not obvious.

**7.10.1.3 Exit Door Tactile Signage.** Tactile signage shall be provided to meet all of the following criteria, unless otherwise provided in 7.10.1.4:

- (1) Tactile signage shall be located at each exit door requiring an exit sign.
- (2) Tactile signage shall read as follows: EXIT.
- (3) Tactile signage shall comply with ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

**7.10.1.4 Existing Exemption.** The requirements of 7.10.1.3 shall not apply to existing buildings, provided that the occupancy classification does not change.

### **7.10.1.5 Exit Access.**

**7.10.1.5.1** Access to exits shall be marked by approved, readily visible signs in all cases where the exit or way to reach the exit is not readily apparent to the occupants.

**7.10.1.5.2\*** New sign placement shall be such that no point in an exit access corridor is in excess of the rated viewing distance or 100 ft (30 m), whichever is less, from the nearest sign.

**7.10.1.6\* Floor Proximity Exit Signs.** Where floor proximity exit signs are required in Chapters 11 through 43, such signs shall comply with 7.10.3, 7.10.4, 7.10.5, and 7.10.6 for externally illuminated signs and 7.10.7 for internally illuminated signs. Such signs shall be located near the floor level in addition to those signs required for doors or corridors. The bottom of the sign shall be not less than 6 in. (150 mm), but not more than 18 in. (455 mm), above the floor. For exit doors, the sign shall be mounted on the door or adjacent to the door, with the nearest edge of the sign within 4 in. (100 mm) of the door frame.

**7.10.1.7\* Floor Proximity Egress Path Marking.** Where floor proximity egress path marking is required in Chapters 11

through 43, an approved floor proximity egress path marking system that is internally illuminated shall be installed within 18 in. (455 mm) of the floor. Floor proximity egress path marking systems shall be listed in accordance with ANSI/UL 1994, Standard for Luminous Egress Path Marking Systems. The system shall provide a visible delineation of the path of travel along the designated exit access and shall be essentially continuous, except as interrupted by doorways, hallways, corridors, or other such architectural features. The system shall operate continuously or at any time the building fire alarm system is activated. The activation, duration, and continuity of operation of the system shall be in accordance with 7.9.2. The system shall be maintained in accordance with the product manufacturing listing.

**7.10.1.8\* Visibility.** Every sign required in Section 7.10 shall be located and of such size, distinctive color, and design that it is readily visible and shall provide contrast with decorations, interior finish, or other signs. No decorations, furnishings, or equipment that impairs visibility of a sign shall be permitted. No brightly illuminated sign (for other than exit purposes), display, or object in or near the line of vision of the required exit sign that could detract attention from the exit sign shall be permitted.

# Life Safety Code

**7.10.1.9 Mounting Location.** The bottom of new egress markings shall be located at a vertical distance of not more than 6 ft 8 in. (2030 mm) above the top edge of the egress opening intended for designation by that marking. Egress markings shall be located at a horizontal distance of not more than the required width of the egress opening, as measured from the edge of the egress opening intended for designation by that marking to the nearest edge of the marking.

## 7.10.2 Directional Signs.

**7.10.2.1\*** A sign complying with 7.10.3, with a directional indicator showing the direction of travel, shall be placed in every location where the direction of travel to reach the nearest exit is not apparent.

**7.10.2.2** Directional exit signs shall be provided within horizontal components of the egress path within exit enclosures as required by 7.10.1.2.2.

## 7.10.3\* Sign Legend.

**7.10.3.1** Signs required by 7.10.1 and 7.10.2 shall read as follows in plainly legible letters, or other appropriate wording shall be used:

## EXIT

**7.10.3.2\*** Where approved by the authority having jurisdiction, pictograms in compliance with NFPA 170, Standard for Fire Safety and Emergency Symbols, shall be permitted.

**7.10.4\* Power Source.** Where emergency lighting facilities are required by the applicable provisions of Chapters 11 through 43 for individual occupancies, the signs, other than approved self-luminous signs and listed photoluminescent signs in accordance with 7.10.7.2, shall be illuminated by the emergency lighting facilities. The level of illumination of the signs shall be in accordance with 7.10.6.3 or 7.10.7 for the required emergency lighting duration as specified in 7.9.2.1. However, the level of illumination shall be permitted to decline to 60 percent at the end of the emergency lighting duration.

## 7.10.5 Illumination of Signs.

**7.10.5.1\* General.** Every sign required by 7.10.1.2, 7.10.1.5, or 7.10.8.1, other than where operations or processes require low lighting levels, shall be suitably illuminated by a reliable light source. Externally and internally illuminated signs shall be legible in both the normal and emergency lighting mode.

## 7.10.5.2\* Continuous Illumination.

**7.10.5.2.1** Every sign required to be illuminated by 7.10.6.3, 7.10.7, and 7.10.8.1 shall be continuously illuminated as required under the provisions of Section 7.8, unless otherwise provided in 7.10.5.2.2.

**7.10.5.2.2\*** Illumination for signs shall be permitted to flash on and off upon activation of the fire alarm system.

## 7.10.6 Externally Illuminated Signs.

### 7.10.6.1\* Size of Signs.

**7.10.6.1.1** Externally illuminated signs required by 7.10.1 and 7.10.2, other than approved existing signs, unless otherwise provided in 7.10.6.1.2, shall read EXIT or shall use other appropriate wording in plainly legible letters sized as follows:

- (1) For new signs, the letters shall be not less than 6 in. (150 mm) high, with the principal strokes of letters not less than 3/4 in. (19 mm) wide.
- (2) For existing signs, the required wording shall be permitted to be in plainly legible letters not less than 4 in. (100 mm) high.
- (3) The word EXIT shall be in letters of a width not less than 2 in. (51 mm), except the letter I, and the minimum spacing between letters shall be not less than 3/8 in. (9.5 mm).
- (4) Sign legend elements larger than the minimum established in 7.10.6.1.1(1) through (3) shall use letter widths, strokes, and spacing in proportion to their height.

**7.10.6.1.2** The requirements of 7.10.6.1.1 shall not apply to marking required by 7.10.1.3 and 7.10.1.7.

### 7.10.6.2\* Size and Location of Directional Indicator.

**7.10.6.2.1** Directional indicators, unless otherwise provided in 7.10.6.2.2, shall comply with all of the following:

- (1) The directional indicator shall be located outside of the EXIT legend, not less than 3/8 in. (9.5 mm) from any letter.
- (2) The directional indicator shall be of a chevron type, as shown in Figure 7.10.6.2.1.
- (3) The directional indicator shall be identifiable as a directional indicator at a distance of 40 ft (12 m).
- (4) A directional indicator larger than the minimum established for compliance with 7.10.6.2.1(3) shall be proportionately increased in height, width, and stroke.
- (5) The directional indicator shall be located at the end of the sign for the direction indicated.



#### 7.10.6.2.1 Chevron Type Indicator.

**7.10.6.2.2** The requirements of 7.10.6.2.1 shall not apply to approved existing signs.

**7.10.6.3\* Level of Illumination.** Externally illuminated signs shall be illuminated by not less than 5 ft-candles (54 lux) at the illuminated surface and shall have a contrast ratio of not less than 0.5.

## 7.10.7 Internally Illuminated Signs.

# Life Safety Code

**7.10.7.1 Listing.** Internally illuminated signs shall be listed in accordance with ANSI/UL 924, Standard for Emergency Lighting and Power Equipment, unless they meet one of the following criteria:

- (1) They are approved existing signs.
- (2) They are existing signs having the required wording in legible letters not less than 4 in. (100 mm) high.
- (3) They are signs that are in accordance with 7.10.1.3 and 7.10.1.6.

**7.10.7.2\* Photoluminescent Signs.** The face of a photoluminescent sign shall be continually illuminated while the building is occupied. The illumination levels on the face of the photoluminescent sign shall be in accordance with its listing. The charging illumination shall be a reliable light source, as determined by the authority having jurisdiction. The charging light source, shall be of a type specified in the product markings.

## 7.10.8 Special Signs.

### 7.10.8.1 Sign Illumination.

**7.10.8.1.1** Where required by other provisions of this Code, special signs shall be illuminated in accordance with 7.10.5, 7.10.6.3, and 7.10.7.

**7.10.8.1.2** Where emergency lighting facilities are required by the applicable provisions of Chapters 11 through 43, the required illumination of special signs shall additionally be provided under emergency lighting conditions.

**7.10.8.2 Characters.** Special signs, where required by other provisions of this Code, shall comply with the visual character requirements of ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

### 7.10.8.3\* No Exit.

**7.10.8.3.1** Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows:

## NO EXIT

**7.10.8.3.2** The NO EXIT sign shall have the word NO in letters 2 in. (51 mm) high, with a stroke width of 3/8 in. (9.5 mm), and the word EXIT in letters 1 in. (25 mm) high, with the word EXIT below the word NO, unless such sign is an approved existing sign.

**7.10.8.4 Elevator Signs.** Elevators that are a part of a means of egress (see 7.2.13.1) shall have both of the following signs with a minimum letter height of 5/8 in. (16 mm) posted in every elevator lobby:

- (1) \*Signs that indicate that the elevator can be used for egress, including any restrictions on use
- (2) \*Signs that indicate the operational status of elevators

**7.10.8.5\* Evacuation Diagram.** Where a posted floor evacuation diagram is required in Chapters 11 through 43, floor evacuation diagrams reflecting the actual floor arrangement and exit locations shall be posted and oriented in a location and manner acceptable to the authority having jurisdiction.

### 7.10.9 Testing and Maintenance.

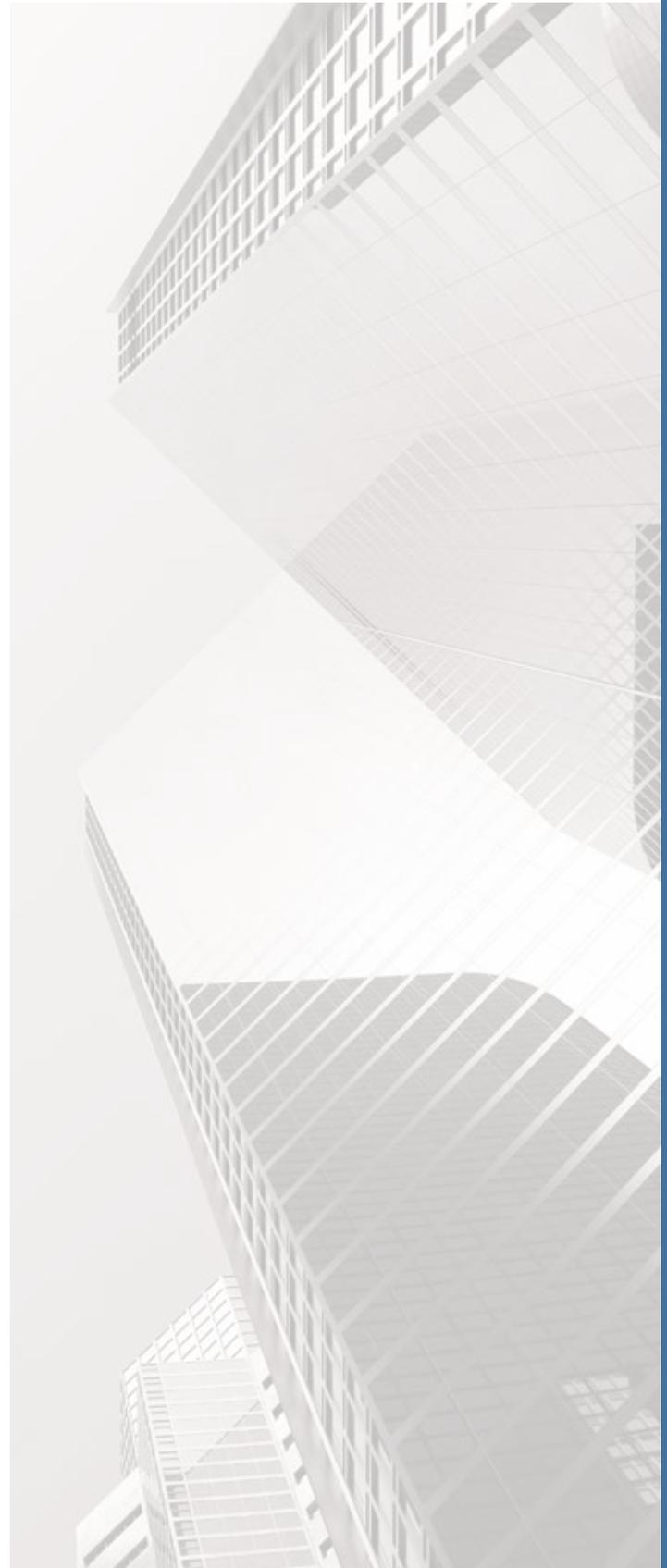
**7.10.9.1 Inspection.** Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days or shall be periodically monitored in accordance with 7.9.3.1.3.

**7.10.9.2 Testing.** Exit signs connected to, or provided with, a battery-operated emergency illumination source, where required in 7.10.4, shall be tested and maintained in accordance with 7.9.3.

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# Limited Warranty

- 1.1 **EMERGI-LITE®** 6, 12 and 24 volt Emergency Lighting Unit Equipment (excluding lamps and fuses) and Exit Signs are fully warranted to be free of defects in material and workmanship under normal use for a period of three years from date of installation (see Paragraph 2.1).
- 1.2 **EMERGI-LITE®** 6, 12 and 24 volt Emergency Lighting Unit Equipment (excluding lamps and fuses) and Exit Signs listed below are fully warranted to be free of defects in material and workmanship under normal use for a period of five years from date of installation (see Paragraph 2.1).

SPEC GRADE ARCHITECTURAL	SPEC GRADE COMMERCIAL	SPEC GRADE INDUSTRIAL	REMOTE	DISTRIBUTOR SELECT
Lux-Ray™ LED Series	Premier™ Battery Series	Survive-All™ SVX Combo Series	Lux-Ray™ LED Series	Prestige™ Thin Series
Revelation™ Series	Premier™ Combo Series	Survive-All™ SVX Exit Series	Revelation™ Series	
Mini-Revelation Series	Premier™ Exit Series	Survive-All™ SVH Series	Mini-Revelation Series	
Prestige™ Series Edge-Lit	Preceptor™ Die-Cast Series	Survive-All™ SVXH Series	HP High Performance Series	
Prestige™ Series X40	Preceptor™ Recessed Series	Survive-All SVXHZ Series		
Prestige™ DX Series	Preceptor™ Remote	HP High Performance Series		
Prestige™ Floor Proximity Series	Capacity Series			

- 1.3 **EMERGI-LITE®** 6, 12 and 24 volt Emergency Lighting Unit Equipment supplied with integrated LED emergency light source are fully warranted to be free of defects in material and workmanship under normal use for a period as stated in Paragraph 1.1 or 1.2 from date of installation (see Paragraph 2.1). (For MR16 LED light source, see Paragraph 3.3).
- 1.4 **EMERGI-LITE®** 6, 12 and 24 volt Unit Equipment Batteries are warranted as follows (Warranty below includes the 3-year full warranty on entire unit as called out in Paragraph 1.0).
- 1.5 **EMERGI-LITE®** 3.6 volt Emergency Lighting Unit Equipment (excluding lamps, and fuses) is fully warranted to be free of defects in material and workmanship under normal use for a period of one year from date of installation (see Paragraph 2.1).

\*Maximum Storage life. Must Be Recharged If Not Placed in Service Or Battery Warranty Void

BATTERY TYPE	LIFE EXPECTANCY	SHELF LIFE*	FULL WARRANTY	PRO RATA WARRANTY
Sealed Lead-Calcium	8 years	6 months	3 years	3 years
High Temperature Lead-Calcium	8 years	6 months	5 years	3 years
Sealed Nickel-Cadmium	10 years	1 year	5 years	5 years
Nickel-Metal Hydride	10 years	1 year	5 years	5 years

- 2.1 The full warranty period begins on the date of installation or 90 days from date of shipment, whichever date is earlier.
- 2.2 Should a defect appear in the equipment or batteries listed in Paragraphs 1.0, 1.1 or 1.2 above within the specified full warranty period, **EMERGI-LITE®** will repair or replace equipment without charge (see Paragraph 3.3). Such repair or replacement shall be the purchaser's exclusive remedy.
- 2.3 The Pro Rata Warranty Period for batteries begins on the date the full warranty period ends.
- 2.4 A battery determined to be defective during the Pro Rata Warranty Period shall be repaired or replaced at a cost equal to the net price in effect at the time, reduced by the percentage obtained in multiplying 10% by the number of full years remaining in the total warranty period. Such repair or replacement at this adjusted price shall be the purchaser's exclusive remedy.
- 3.1 All warranties are subject to proper installation and maintenance in accordance with the instructions supplied.
- 3.2 Any material deemed defective must be returned, freight prepaid, to the factory for evaluation (see Paragraph 5.0-5.3). Any changes in circuitry or components by other than authorized **EMERGI-LITE®** personnel or its service companies will void the warranty.
- 3.3 All warranties are limited to the repair and/or replacement of parts or equipment, which, upon examination at our plant, are determined to be defective and in our judgement are subject to repair or replacement under warranty. Replacement of lamps and fuses is not included in the warranty except for MR16 LED lamps are warranted to be free of defects in material and workmanship under normal use for a period of five (5) years when purchased and used with **EMERGI-LITE®** Battery Units, Combination Units or Remotes. The full warranty period begins on the date of installation or ninety (90) days from the date of shipment, whichever date is earlier.
- 3.4 If new replacement parts are shipped before defective goods are received for evaluation, the replacement parts will be invoiced at the net price in effect at that time. These charges will be credited if, upon receipt and evaluation of goods, a defect is determined. Only replacement parts will be shipped under these circumstances, if field replacement is possible. **EMERGI-LITE® FACTORY ONLY RESERVES THE RIGHT TO SHIP NEW UNIT EQUIPMENT FOR REPLACEMENT PURPOSES.** Units returned after installation cannot be restored to 100% saleable condition.
- 4.1 In no event shall **EMERGI-LITE®** be liable for backcharges of any kind, including, without limitation, labor charges for field repair or late penalties.
- 4.2 This warranty does not cover damages caused by improper maintenance of installation or damage due to installation in areas with other than normal temperatures and environmental conditions per application specifications. **EMERGI-LITE®** assumes no responsibility for any damage to people, property, apparatus or otherwise resulting from improper installation or maintenance of its Emergency Lighting Unit Equipment.
- 4.3 This warranty does not cover damages caused by abuse, fire or Act of God.
- 4.4 In no event shall **EMERGI-LITE®** be liable for incidental or consequential damages.
- 4.5 The foregoing warranty is in lieu of all other warranties, expressed or implied, or merchantability, fitness for a particular purpose or any other thing. Except as stated in this warranty, **EMERGI-LITE®** shall not be liable for any defects in, or breach of any contract relating to, the quality of performance of **EMERGI-LITE®** Equipment under any theory of law including, without limitation, contract, negligence, strict liability or misrepresentation.
- 4.6 **EMERGI-LITE®** warranty coverage shall not apply to any equipment of another manufacturer used in conjunction with **EMERGI-LITE®** Equipment.
- 4.7 Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This written warranty gives you specific legal rights and you may also have other rights which vary from state to state.
- 5.1 No returned defective materials will be accepted without a Returned Goods Authorization issued in writing by an authorized **EMERGI-LITE®** employee.
- 5.2 Purchaser is responsible for secure packing of returned materials to provide best possible assurance against damage in shipment.
- 5.3 Defective batteries of any kind must not be returned to **EMERGI-LITE®** factory without strict adherence to special instructions for handling and shipping. **WARNING** Never ship a refillable wet battery in any type of emergency lighting equipment. Failure to adhere to this policy will void warranty.
- 5.4 Defective goods returned to the factory must be shipped prepaid. **COLLECT RETURNED SHIPMENT WILL BE REFUSED.** Freight charges to return repaired equipment or ship replacement equipment to the purchaser to be paid by **EMERGI-LITE®**. Factory will return repaired goods via same shipping method as received.

FAILURE TO COMPLY WITH ANY OF THE STIPULATIONS SET FORTH WILL VOID THE WARRANTY. ANY EXCEPTIONS TO THE FOREGOING WARRANTY MUST BE REQUESTED AND ACCEPTED IN WRITING PRIOR TO SHIPMENT. **Emergi-lite® EQUIPMENT NOT LISTED IN PARAGRAPHS 1.0, 1.1 OR 1.2 IS WARRANTED AS DESCRIBED ON ITS INDIVIDUAL DATA SHEET WITH THE STIPULATIONS AS STATED IN PARAGRAPHS 2.0-5.3.**