



# SERIES EC, E12C, EN, E12N

TYPE: \_\_\_\_\_  
 CATALOGUE #: \_\_\_\_\_  
 NOTES: \_\_\_\_\_



## 6 & 12 Volt Emergency Lighting Units for Division 2 Areas

**For operation in Hazardous Areas**  
 Class I, Div. 2, Groups C & D  
 Class II, Div. 2, Groups E & F  
**Design to meet UL924 standards**  
**Enclosure meets requirements for operation under NEMA 1, 2, 3, 3R, 3S, 12 and 13 conditions.**

**Application** Series EN & EC (6V) and E12N & E12C (12V) self-contained emergency lighting units are designed to meet the specific requirements of Division 2 hazardous areas (Class I, Div. 2, Groups C & D, Class II, Div. 2, Groups E, F & G). Typical applications include any location where flammable materials are stored, handled, or pumped, adjacent areas where separation could break down under abnormal conditions, or virtually any public or private warehouse that stores hazardous material in drums, cartons, etc.

### Features

■ **CONSTRUCTION:** All units are housed in water and corrosion-resistant cabinets constructed from glass reinforced structural foam. Cabinets are fully sealed and gasketed and all external hardware is stainless steel. Door covers are hinged in such a way as to permit either retention of the hinge when opened or complete removal of the door. External electrical components, including test switch and indicator light, are explosion proof in design and exceed requirements for Division 2 areas. The battery compartment is vented by a one-way breather device to permit exhaust of battery gases and relief of internal pressure without admitting external moisture or corrosives elements.

- **ADVANCED ELECTRONICS:**
- Automatic solid state charger.
  - Low voltage disconnect protects batteries against excessive discharge.
  - Brownout protection circuit (Series EC, E12C).
  - Dual input voltage 120V/277Vac, 60Hz, 0.3/0.15 Amp with safety isolation transformer.
  - Load relay with fused distribution circuit.

- **CONTROLS:**
- Momentary test switch
  - AC-ON indicator light

### Battery

Series EN and E12N units feature a 6 or 12V maintenance-free sealed, rechargeable Nickel-Cadmium battery. The Nickel-Cadmium battery features long life and superior resistance to temperature extremes. Series EC and E12C units feature a 6 or 12V maintenance-free sealed Lead Calcium battery.

### Lamp Heads

Units are equipped with a choice of incandescent or halogen sealed beam lamps - see lamp chart. Lamps are housed in industrial gray thermoplastic lamp shells with matching swivel. The sealed beam design completely isolates internal components from atmosphere. Wire connections are silicone sealed.

### Options

(Add Suffix to Model No.)      Suffix  
 Time Delay (12 min.) . . . . . -TD  
 Shatter resistant lamp coating . . . . -FP

### Accessories

(Order as separate item)      Model  
 Guard . . . . . WG3-L

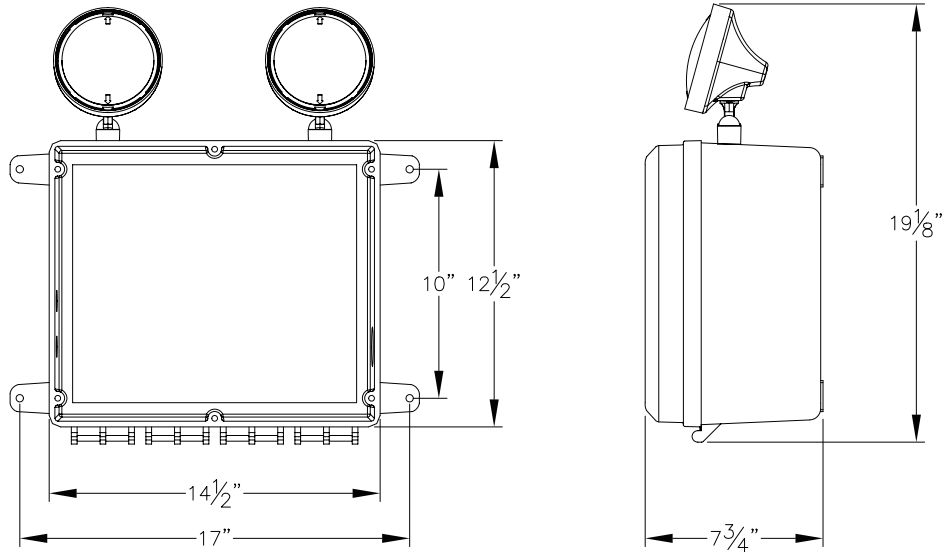
### Unit Selection Chart

Volts	Unit Model No.	Battery Type	Input Watts	Capacity in Watts to 87 1/2% of Nominal Battery Voltage			
				1 1/2 Hrs.	2 Hrs.	3 Hrs.	4 Hrs.
6	2EC50	Sealed Lead Calcium	18	50	40	30	22
	2EC100	Calcium	60	100	75	50	36
	2EN25	Sealed Nicad	40	25	20	13	9
	2EN50	Nicad	40	50	40	25	19
12	2E12C50	Sealed Lead Calcium	18	50	40	30	22
	2E12C100	Calcium	60	100	75	50	36
	2E12N50	Sealed Nicad	60	50	40	28	20

### Lamp Chart

	Lamp Wattage	DC Voltage	Lumen Output	Lamp Type	Lamp Suffix (Add to Unit Model No.)
Use With 6-Volt EC, EN Series	8	6	180	Halogen	H7551
	18	6	220	Incand.	
	25	6	350	Incand.	
Use with 12-Volt E12C, E12N Series	8	12	180	Halogen	4510
	18	12	220	Incand.	H7555
	25	12	350	Incand.	4414
				Incand.	4446

# Specifications For Series EC, E12C, EN, E12N



**GENERAL:** The contractor shall furnish and install as indicated on all plans a 6 or 12 volt emergency lighting unit designed for Class I, Div. 2, Groups C & D and Class II, Div. 2, Groups E, F & G hazardous areas. Units shall also meet requirements for operation under NEMA 1, 2, 3, 3R, 3S, 12 and 13 conditions.

**CABINET:** Shall be glass-reinforced, injection-molded structural foam. Cabinets shall be fully and mechanically gasketed around cover with all factory installed, through wire openings to be sealed with silicone. Class I, Div. 2 bushing shall be furnished to preserve classified area design upon installation of AC conduit.

**LAMP HEADS:** Shall be sealed beam halogen or incandescent \_\_\_\_\_ volt \_\_\_\_\_ watts (8 watt halogen, 18 or 25 watt incandescent). Sealed beam lamps shall be housed in an industrial thermoplastic housing with matching swivel. Wire connections to lamps shall be silicone treated.

**SURFACE TEMPERATURES:** All external elements of cabinet, swivels and lamps shall, under operating conditions, result in surface temperatures less than the ignition temperatures in Groups C & D, E, F & G, as they are defined by NEC® Articles 500 through 503.

**EXTERNAL ELECTRICAL/MECHANICAL COMPONENTS:** Test switch and an AC indicator light shall be of explosion-proof design, meeting Class I/II, Div. 2 requirements. Units shall be equipped with a one-way breather vent designed for Class I/II, Div. 2 operation.

**SOLID STATE TRANSFER:** Activation of emergency lighting shall be by a solid state transfer device that connects load to batteries without the use of a mechanical relay.

**BATTERIES:** Series EN and E12N units shall contain sealed, maintenance-free, 6 or 12 Volt Nickel-Cadmium batteries. Series EC and E12C units shall contain sealed, maintenance-free, 6 or 12V Lead Calcium batteries.

**CHARGER:** (Both battery types) shall be completely automatic, feature solid state components and be capable of recharging the batteries in accord with the provisions of UL 924. Charger shall provide a high charge rate immediately upon restoration of AC power and a float rate to maintain the battery at float voltages. For sealed Nickel-Cadmium batteries (Series EN and E12N) charger shall be a constant current type.

For Sealed Lead Calcium Batteries (Series EC and E12C) charger shall be an automatic solid state SCR type.

**LIMITED WARRANTY:** The entire unit (less lamps and fuses) shall carry a full three (3) year warranty against defects in parts and improper workmanship under normal operation.

Sealed Lead Calcium batteries shall carry an additional three (3) year pro-rata warranty. The sealed Nickel-Cadmium battery shall carry a 5 year full, plus an additional 5 year pro-rata warranty.

**MANUFACTURER:**

Unit shall be **Lightalarms** Model \_\_\_\_\_

## Ordering Information

Example: 2EC100/H7551-TD

Number of Heads	Series	Capacity Indicator	Lamp Suffix	Options
2= 2 heads	EC = series	100 = capacity	/H7551 = 8W 6V <i>*See Lamp Chart.</i>	-TD= time delay



**Thomas & Betts**