

ELS Series Emergency Lighting System

Explosionproof, Dust-Ignitionproof

Remote and direct mounted fixtures for hazardous location applications

NEC:

Class I, Division 1 and 2, Groups B ①, C, D

Class II, Division 1 and 2, Groups E, F, G

Class III

Applications

- ELS Series features an emergency lighting power unit that is designed to provide safe operation in the presence of hazardous gases, vapors or dusts, defined by the National Electrical Code as Class I, Groups C and D, and Class II, Groups E, F and G.
- Typical applications include all means of egress (such as walkways, exit ramps, stairs and aisles) for hazardous areas which include oil refineries, petrochemical facilities, pulp and paper mills, chemical storage areas, wastewater treatment facilities and grain elevators.

Features

- The electronics consist of a solid-state charger, transfer circuit and low-voltage battery disconnect circuit.
- The unit test switch and AC "On" indicator light are housed in a separate module that may be attached directly to the unit housing or mounted remotely for ease of testing.
- All ELS Series units are rated for operation in NEC Class I, Division 1 and 2, Groups C and D; and Class II, Division 1 and 2, Groups E, F, and G environments.
- Housing provisions allow for the attachment of two optional explosionproof lighting fixtures.
- Unit capacity is sufficient for the connection of up to four 6- or 12- volt, 18-watt fixtures.
- Units provide 90 minutes of emergency operation.
- The solid-state charger maintains battery at full charge.
- Upon failure of utility voltage, the DC emergency lighting load is connected to the battery.
- During emergency operation, automatic battery protection from deep discharge damage is provided by a low-voltage battery disconnect (LVD) circuit.
- Upon restoration of normal power, the charger will begin a recharge cycle. It will bring the battery to full capacity within acceptable UL time standards.
- A pilot light indicates the presence of AC line voltage, and a test switch is provided for checking transfer operation. Lock-out type guard on push button accepts locks with up to 6.5 mm (1/4 in) hasp.
- A universal transformer allows operation on 120 or 277 Vac lines.
- Emergency power source is a maintenance-free, sealed, pure-lead battery suited for harsh temperature environments for 0 °C to +40 °C (+32 °F to +104 °F).
 - Never necessary to add water.
 - Expected life is 10 years
 - Compact in design
- Standard illumination is provided during power failure only using fixtures specially designed for emergency lighting in hazardous environments, supplied with double contact bayonet base 18- or 28-watt incandescent lamps.
- Designed for easy installation. Provided with 4 mounting holes for attachment to a wall or other suitable surface. Mounting hardware not included.
- Housing is drilled and tapped for installation of utility 12.7 mm (1/2 in) NPT conduit.
- Quick access to internal wiring and components is provided by thread-on cover.
- All necessary fittings for test switch/ pilot light module supplied standard.



Standard Materials

- Battery enclosure, fixtures, guards and pendant mount: copperfree (4/10 of 1% max.) aluminum.
- Ceiling and bracket mounts: malleable iron with aluminum adapter
- Reflectors: porcelain enameled steel
- Test Switch: copperfree (4/10 of 1% max.) aluminum with stainless steel hardware

Standard Finishes

- Enclosure, fixtures and test station: epoxy powder coat finish electrostatically applied for complete and uniform surface protection
- Reflectors: white porcelain enamel

Options

- The fixture may be adapted to serve as an exit sign through use of an Auxiliary Exit Housing.
- Time Delay Relay (15 minutes) available to permit normal lighting to re-establish brightness. Add suffix **-T1** for 120 Vac, or **-T2** for 277 Vac.

NEC Certifications and Compliances

- UL Standard: UL 924, UL 844, UL 1598
- UL Listed: 175025

① Contact your sales representative for Class I, Group B rating.

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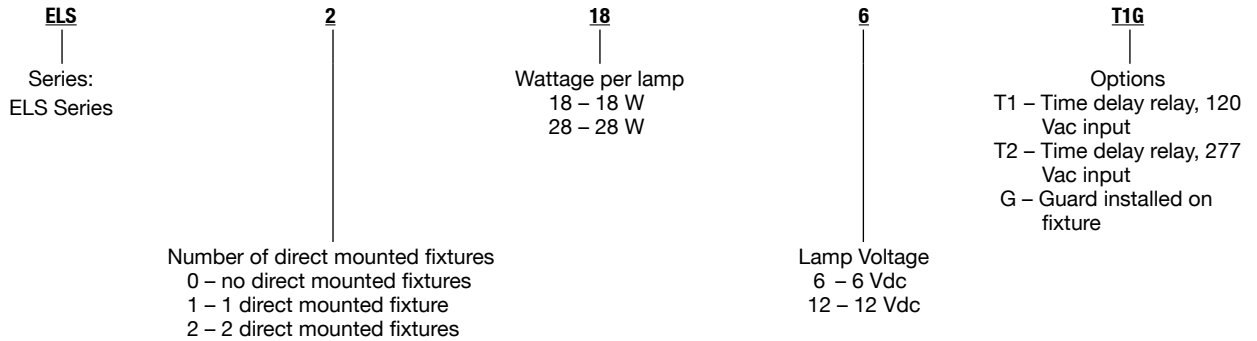
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Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide



Capacity of standard ELS unit (75 W for 90 minutes)

Up to 2 fixtures may be direct mounted. The remainder must be remote mounted.

Combination Number	Number of Fixtures	Wattage per Fixture	Total Wattage
1	1	18	18
2	1	28	28
3	2	18	36
4	2	28	56
5	3	18	54
6	1	28	64
6	2	18	64
7	4	18	72

Lamp Watts	Supply Wire Temp °C (°F)	Ambient Temp °C (°F)	Class I, Division 1 and 2 Operating Temperature	Class II, Division 1 and 2 (Groups E, F and G) Operating Temperature
18	125 (257)	40 (104)	T5	T3C
28	125 (257)	40 (104)	T5	T3C

“T” Numbers Represent the Maximum Surface Temperature for Class I, Division 1 Locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations.

NOTE: The maximum operating temperature of the fixture must not exceed the ignition temperature of the gas, vapor or dust to be encountered per the National Electrical Code. Operating temperatures are with and without reflectors and guards.

“T” Number	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range (°C)	351-450	326-350	301-325	281-300	261-280	231-260	216-230	201-215	181-200	166-180	161-165	136-160	121-135	101-120	86-100	85
Temp Range (°F)	664-842	619-662	574-617	538-572	502-536	448-500	421-446	394-419	358-392	331-356	322-329	277-320	250-275	214-248	187-212	185

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Emergency Lighting System with Direct Mounted Fixtures

	Number of Fixtures	Watts per Lamp	Lamp Voltage	Input Voltage	Catalog Number (Lamp(s) Included)
	2	18	6 Vdc	120/277 Vac	ELS2186 ①②③④
	2	28	6 Vdc	120/277 Vac	ELS2286 ①②③④
	2	18	12 Vdc	120/277 Vac	ELS21812 ①②③④
	2	28	12 Vdc	120/277 Vac	ELS22812 ①②③④
	1	18	6 Vdc	120/277 Vac	ELS1186 ②③④
	1	28	6 Vdc	120/277 Vac	ELS1286 ①②③④
	1	18	12 Vdc	120/277 Vac	ELS11812 ①②③④
	1	28	12 Vdc	120/277 Vac	ELS12812 ①②③④

Emergency Lighting System Enclosure with Battery and Charger

	Lamp Voltage	Input Voltage	Catalog Number with Push-to-Test (Incl. Fittings)
	6 Vdc	120/277 Vac	ELS06 ①②③
	12 Vdc	120/277 Vac	ELS012 ①②③

Emergency Lighting System Fixture for Direct Mounting to Enclosure Includes all necessary fittings and lamp.

	Watts Per Lamp	Lamp Voltage	Catalog Number (Lamp Included)
	18	6 Vdc	AP1050-186-DM ④
	28	6 Vdc	AP1050-286-DM ④
	18	12 Vdc	AP1050-1812-DM ④
	28	12 Vdc	AP1050-2812-DM ④

① 1/2" NPT provided for AC input.

② Add suffix **T1** for time delay relay for 120 Vac input.

③ Add suffix **T2** for time delay relay for 277 Vac input.

④ To order fixtures with guard installed add suffix **-G**. Reflectors and exit signs are ordered separately. See Accessories page.

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Emergency Lighting System Fixture for Remote Mounting — Lamp Included — Shown with Optional Guard

	Mounting Type	Watts Per Lamp	Lamp Voltage	Catalog Number (Lamp Included) ①
Pendant — One 1/2" Hub				
		18	6 Vdc	AP1050-186
		28	6 Vdc	AP1050-286
		18	12 Vdc	AP1050-1812
		28	12 Vdc	AP1050-2812
Ceiling — Four 1/2" Hubs, Three Close-Up Plugs				
		18	6 Vdc	AC1050-186
		28	6 Vdc	AC1050-286
		18	12 Vdc	AC1050-1812
		28	12 Vdc	AC1050-2812
Long Bracket — Four 1/2" Hubs, Three Close-Up Plugs				
		18	6 Vdc	ALB1050-186
		28	6 Vdc	ALB1050-286
		18	12 Vdc	ALB1050-1812
		28	12 Vdc	ALB1050-2812
Short Bracket — 15 degrees — Two 1/2" Hubs, One Close-Up Plug				
		18	6 Vdc	ASB1050-186
		28	6 Vdc	ASB1050-286
		18	12 Vdc	ASB1050-1812
		28	12 Vdc	ASB1050-2812
Emergency Lighting System Replacement Fixtures — Lamp included — Fits existing mounting hood				
		18	6 Vdc	AAU1N-186
		28	6 Vdc	AAU1N-286
		18	12 Vdc	AAU1N-1812
		28	12 Vdc	AAU1N-2812

① To order fixtures with guard installed, add suffix -G. Reflectors and exit signs are ordered separately. See Accessories page.







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	Description	Catalog Number
Guard		AAGU-1
Three-Way Exit Sign	 Epoxy enameled steel — 6”-high red lettering Mounts to fixture units in place of guard.	CJEXRN
Single-Sided Exit Sign	 Epoxy enameled steel — 6”-high red lettering Mounts to fixture units in place of guard.	AEXR-15R
30° Angle Reflector		AARW15AN
Standard Dome Reflector		AARW15ST
Push-to-Test Station	 Complete Push-to-Test Station EFDCB150J1U1-T-A Cover with Switch and Pilot Light EFKB-J1U1-TEST Switch Only SPBB-U1-Q Pilot Light Only SPLNS-RE-B	

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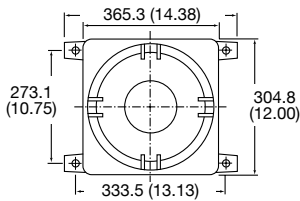
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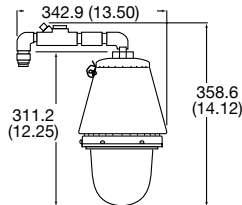
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Weight kg (lb)	Catalog Number	Weight kg (lb)	Catalog Number
23.6 (52.03)	ELS06, ELS012	3.4 (7.50)	AAU1N-186
5.0 (11.02)	AP1050-186-DM	0.2 (0.44)	AAGU1
4.1 (9.04)	AP1050-186	2.3 (5.07)	AEXR-15R
5.7 (12.57)	AC1050-186	2.3 (5.07)	CJEXRN
7.5 (16.53)	ALB1050-186	1.0 (2.20)	AARW15AN
5.7 (12.57)	ASB1050-186	1.0 (2.20)	AARW15ST
1.8 (3.97)	EFDCB150J1U1-T-A		

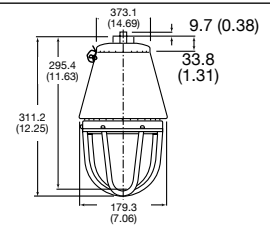
Dimensions in Millimeters (Inches)



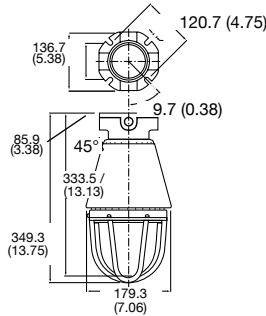
Battery Enclosure



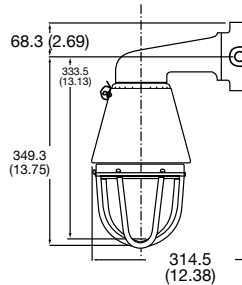
Direct Mount fixture



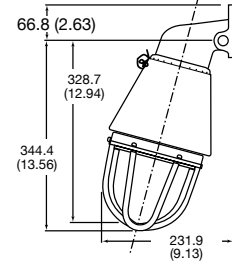
Pendant Mount



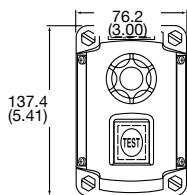
Ceiling Mount



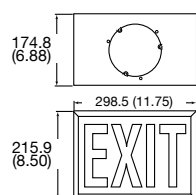
Long Bracket Mount



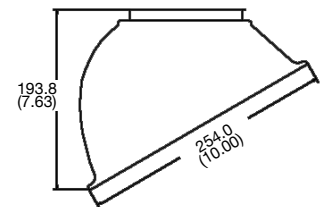
Short Bracket Mount



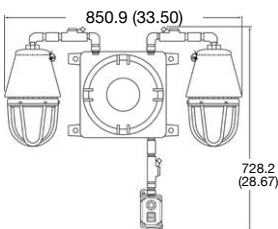
EFDCB150J1JU1-T-A



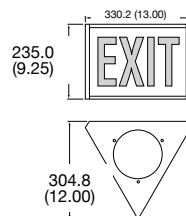
AEXR-15R



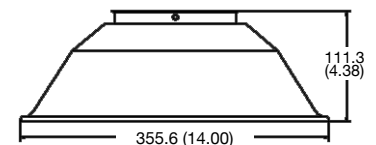
AARW15AN



ELS with 2 direct mounted fixtures



CJEXRN



AARW15ST

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