

ELS Series Emergency Lighting System

Explosionproof, Dust-Ignitionproof

Remote and direct mounted fixtures for hazardous location applications

Class I, Division 1 and 2, Groups B*, 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 1/4"/6.5 mm 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 32 °F to 104 °F/0 °C to 40 °C.
 - 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 1/2"/12.7 mm 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.

Certifications and Compliances

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

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

ELS Series Emergency Lighting System Technical Data

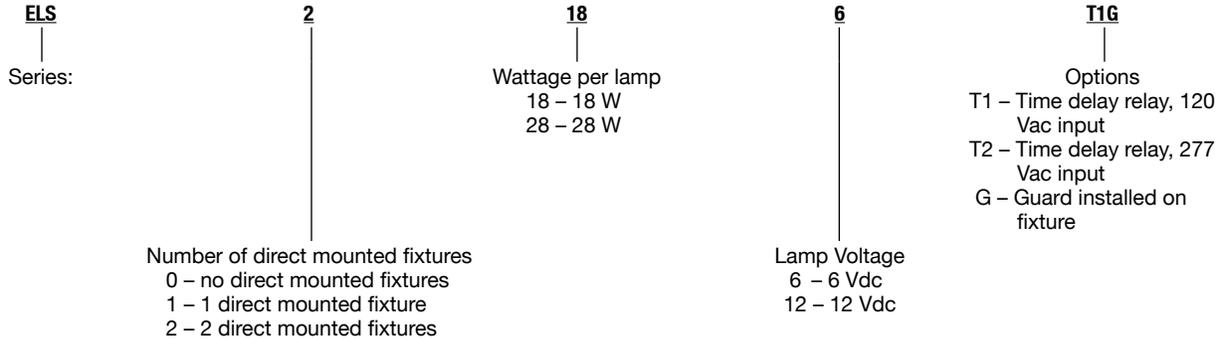
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Order using catalog numbering guide below or select catalog number from tables on following pages.

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 °F/°C | Ambient Temp °F/°C | Class I, Division 1 & 2 Operating Temperature | Class II, Division 1 & 2 (Groups E, F & G) Operating Temperature |
|------------|------------------------|--------------------|---|--|
| 18 | 257/125 | 104/40 | T5 | T3C |
| 28 | 257/125 | 104/40 | 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 (°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 |
| 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 |

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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 ①②③④ |
| | 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.

ELS Series Emergency Lighting System Accessories

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| | Description | Catalog Number |
|-------------------------|---|---|
| Guard |  | AAGU1 |
| 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 Cover with Switch and Pilot Light Switch Only Pilot Light Only Lamp, 18 W, 6 Vdc Lamp, 28 W, 6 Vdc Lamp, 18 W, 12 Vdc Lamp, 28 W, 12 Vdc | EFDCB150J1U1-T-A EFKB-J1U1-TEST SPBB-U1-Q SPLNS-RE-B 59620527074 59620527075 59620527076 59620527078 |

Lighting

LIGHTING: EXPLOSIONPROOF — EMERGENCY