Sure-Lites

DESCRIPTION

The UX series Exit is a UL 924 code compliant solution for harsh industrial and outdoor environments. It has both a NEMA4X and an IP66 rating, is approved for temperatures from -30 C to 50 C as well as a class 1, division 2 hazardous location option. The housing is die cast aluminum with a vandal proof shield. The LED source is field configurable for red or green output. The self powered version comes standard with a nickel cadmium battery and self-diagnostics.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical
- Voltage Input 120/240/277 VAC
- Low-Voltage Disconnect
- Brownout Circuit
- Overload/Short Circuit Protection
- Test Switch/Power Indicator Light
- Photocell Test Switch (requires accessory laser for activation)
- Fully Recharged in 24 Hours
- Self-diagnostics standard on self-powered versions

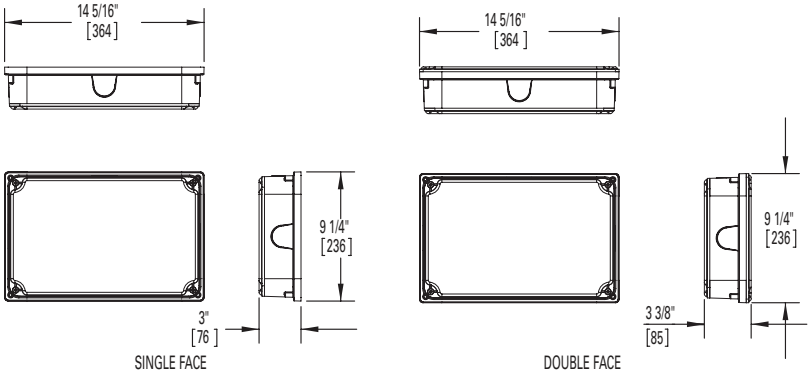
Housing Construction
- Die cast aluminum housing
- Die cast canopy included (for mounting convenience only - no electrical components in canopy)
- Universal pattern knockouts on rear of single face housing for direct mounting to junction box
- Exit can be universally mounted ceiling, wall or end
- Painted finish
- NFPA 101 compliant knockout chevrons allow quick conversion to directional signs
- UV stable clear, polycarbonate, vandal resistant shield with Torx® head tamperproof screws, stainless steel
- Knockouts provided for 1/2" conduit entry

Lamp Data
- LED lamp provides uniform light output
- Red and green lettering
- Field Configurable

Code Compliance
- UL 924, Outdoor Wet Location Listed (suitable for wet and damp locations)
- UL50, NEMA 4X
- UL844, Hazardous Locations (Class I, Division 2, Groups A, B, C, D)
- HAZ LOCATION CODE T6 with HAZ Connection
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation, UL Listed, ADA (American Disabilities Act)
- NSF, National Sanitation Foundation/Splash Zone (for Food Processing)
- IP66, Ingress Protection from IEC (International Electrical Commission)
- Cleanrooms Class 10,000
- Meets New York City Exit construction code

Warranty
- Exit: 5-year
- Battery: 7-Year Pro-rata

Temperature Performance Data
UX7: -30°C to 50°C
UX6: -40°C to 50°C



CATALOG LOGIC

Series	Faces	Housing Color	Hazardous Location	Accessory
UX6 = AC only	1 = single 2 = double	_= Silver WH = White BK = Black	_= not Hazardous location HAZ = Hazardous Location	2C capability, UX2C-KIT can be purchased as a separate accessory

Series	Faces	Housing Color	SD	Hazardous Location
UX7 = battery	1 = single 2 = double	_= Silver WH = White BK = Black	SD = standard	_= not Hazardous location HAZ = Hazardous Location



UX SERIES

UL924 WET LOCATION
ULTIMATE EXIT

NEMA 4X
CLASS 1, DIV 2
HAZARDOUS LOCATION

PENDANT AND UNIVERSAL
SURFACE MOUNT

SELF POWERED

LED LAMPS

VANDAL PROOF
SELF-DIAGNOSTIC

NYC APPROVED

EXIT LIGHTING

UL LISTED

NFPA

-30°to 50°C operating temperature range

NEMA Setting Standards for Excellence

NSF SPLASH ZONE

OSHA

wet location

EATON
Powering Business Worldwide

ENERGY DATA

Fixture	Input Voltage	Input Current	Input Power	Power Factor
UX6	120 V / 60 Hz	0.09 Amps	1.1 watts	0.11
	277 V / 60 Hz	0.09 Amps	1.3 watts	0.06
UX7	120 V / 60 Hz	0.1 Amps	1.4 watts	0.12
	277 V / 60 Hz	0.1 Amps	1.6 watts	0.06

TECHNICAL DATA

Lamps
The UX Family with energy saving LED lamps offers extremely long life with very low input wattage. LED lamps are available in either red or green. LED lamps have a long life, eliminating the need for any lamp maintenance under normal conditions.

Housing
Die cast aluminum with painted finish. NFPA 101 compliant knockout chevrons for easy conversion to directional sign. Universal pattern knockouts are in the back of the single face housing for direct mounting to junction box. Conduit entry knockouts provided. UV stable, polycarbonate shield for protection. Gasketing provides water-tight, dust-tight housing is UL Wet Locations, NEMA4X, IP66, and Class 1, DIV 2 enclosure.

Electronics
Dual voltage input 120/277 VAC is standard. Nickel Cadmium battery is standard on self-powered exits. All battery and electrical components are enclosed within the exit housing, preserving the low profile appearance even on self-powered exits.

Photocell Test Switch
Allows verification of proper operation of the transfer circuit and emergency lamps with a laser pointer (laser is sold as an accessory). The emergency lamps will test for 30 seconds when activated.

Self-Diagnostics
The Eagle Eye self-diagnostic software will automatically perform all tests required by UL924, and NFPA 101 and will systematically calibrate itself in the field; thus reducing installation labor and eliminating manual calibration errors. The system indicates the status of the emergency light at all times using the LED indicator. A 90 minute battery test will occur once every twelve months. A 30 second battery power simulation test will occur every 30 days. The solid state microprocessor based system has the ability to accurately detect and warn of system failures, plus it incorporates all of the standard electronic features that sets Sure-Lites apart from its competition.

Solid-State Charger
Supplied with a 120/277 VAC, voltage regulated solid-state charger, the battery is recharged immediately upon restoration of AC current after a power failure. The charge circuit reacts to the condition of the battery in order to maintain peak battery capacity and maximize battery life. Solidstate construction recharges the battery following a power failure in accordance with UL 924.

Solid-State Transfer
The UX Series Exit incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low-Voltage Disconnect
When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

2C Capability (UX6 versions only)
The AC only versions of the UX series can be function in 2C mode with the addition of the UX2C-KIT which is purchased separately.

Overload and Short Circuit Protection
The solid-state overload monitoring device in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short circuit is removed. This overload current protective feature eliminates the need for fuses or circuit breakers for the DC load.

Brownout Circuit
The brownout circuit on Sure-Lites exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Test Switch/Power Indicator Light
A test switch permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery
Sure-Lites sealed nickel cadmium batteries are maintenance-free and offer high discharge rates and stable performance over a wide range of temperatures.

Warranty
This Sure-Lites UX Exit is backed by a firm five (5) year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed nickel cadmium batteries carry a seven year pro-rata warranty.

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

SELF DIAGNOSTIC TESTING OPERATIONS

The Sure-Lites Self Diagnostics is continuously monitoring your emergency fixture, and will signal any failure through the 3 color indicator LED.

Initial Operation:
When the unit is first powered up, it will go into a 24 hour fast charge, indicated by the indicator LED pulsing green. Once the unit has fully charged, it will perform a self calibration, after which the LED will change to steady green, indicating the unit is fully charged and float charging the battery to maintain readiness.

Automatic Testing:
The unit will perform a battery capacity, lamp/LED, and charge circuit test every 30 days for 30 seconds. During this time, the indicator LED will change to a steady yellow. It will perform a full battery capacity (90 minute) test once per year. During this time, the indicator LED will change to a blinking yellow.

Manual Testing:
- 10 Second "Installation" test – Press and release the test button once during fast charge (blinking green) to initiate a 10 second quick test. The sign will switch to emergency mode for 10 seconds allowing the installer to verify proper installation of the unit, and the LED indicator will turn solid yellow.
- 30 Second Test - Press and release the test button once during float charge (steady green). The indicator LED will turn steady yellow to indicate the unit is performing a 30 second test of the batteries and lamps/LEDs.
- 90 Minute Test - Press and release the test button a second time during a 30 second test (steady yellow) to change to a 90 minute test. During this test, the LED indicator will change to blinking yellow, and the circuit will perform a full battery capacity, charge circuit, and LED test.
- Canceling Test – Press and release the test button during the 90 minute test (flashing yellow) to return the fixture to its original state (fast charge or float charge)

Laser Test:
The SEL SD products are equipped with a Laser Test function, that allows the unit to be manually tested without the need to physically press the test button. Shining a laser pointer in the hole marked "LASER TEST" on the bottom of the unit has the same effect as a press and release of the test button.

Clearing Failure Codes:
- A battery failure (LED two blink red) can be cleared by replacing the battery. Disconnecting the battery and AC power, or performing a full 90 minute discharge, will reset the error code, however, it will return if the battery is faulty
- Charge Circuit (LED three blink red) and lamp/LED failure (LED four blink red) will clear when the unit successfully passes a manual or automatic 30 second test.

NATIONAL ELECTRICAL CODE (NEC)

The National Electrical Code (NEC) defines a hazardous location as "a location where fire hazards or explosion hazards may exist due to flammable gases or vapors, flammable liquids, combustible dust or ignitable fibers or filings.

The Code further separates these hazardous locations into three classes:

Class I – locations containing gases and vapors

Class II – locations containing dust

Class III – locations containing fibers and filings.

Each of these classes is broken into divisions. These divisions are separated into groups according to characteristics.

The UX-HAZ Exit Sign Series is rated for Class 1, Division 2, Groups A, B, C, D only.

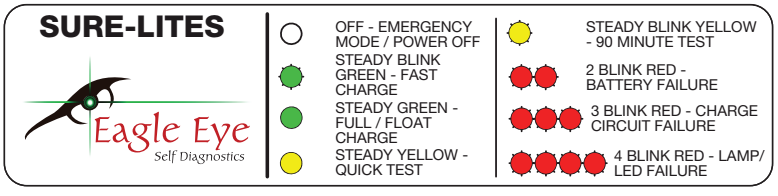
The following chart summarizes these classifications:

Class	Division	Group
I Gas	2 Potential Exists – May be present in atmosphere	**A** Acetylene **B** Flammable gas, flammable liquid-produced vapor, or combustible liquid-produced vapor mixed with air that may burn or explode, having either a maximum experimental safe gap (MESG) value less than or equal to 0.45 mm or a minimum igniting current ratio (MIC ratio) less than or equal to 0.40. (Example material is hydrogen) **C** Flammable gas, flammable liquid-produced vapor, or combustible liquid-produced vapor mixed with air that may burn or explode, having either a maximum experimental safe gap (MESG) value greater than 0.45 mm and less than or equal to 0.75 mm, or a minimum igniting current ratio (MIC ratio) greater than 0.40 and less than or equal to 0.80. (Example material is ethylene) **D** Flammable gas, flammable liquid-produced vapor, or combustible liquid-produced vapor mixed with air that may burn or explode, having either a maximum experimental safe gap (MESG) value greater than 0.75 mm or a minimum igniting current ratio (MIC ratio) greater than 0.80. (Example material is propane)

SELF DIAGNOSTIC TESTING OPERATIONS

Indicators:
- LED Off - No power to unit, emergency mode.
- LED Steady Green - Unit is fully charged and is float charging the battery to maintain readiness.
- LED Green Pulse - Unit is in a 24 hour fast charge of the battery.
- LED Two Blink Red - Battery has failed a capacity test, or the battery is disconnected. See "Clearing Failure Codes" above.
- LED Three Blink Red - Battery charge circuit has failed. See "Clearing Failure Codes" above.
- LED Four Blink Red - Lamps have burned out, or on an EXIT/Combo, 50% or more of the LEDs have failed. See "Clearing Failure Codes" above.
- LED Steady Yellow - 30 second test or 10 second quick test (Fast Charge only).
- LED Blinking Yellow - 90 minute test.

Maintenance:
None required. Replace the batteries as needed according to ambient conditions. However, we recommend that the equipment be tested regularly in accordance with local codes.



Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.