

COOPER LIGHTING - SURE-LITES®

DESCRIPTION

The Sure-Lites UX Nema 4X Exit combines the strength and durability of die cast aluminum with architecturally pleasing aesthetics. Designed for the most severe environments, the UX exit will provide maximum performance against rain, moisture, cold, corrosives and dust. Additional designed in features such as LED technology provides the customer with a long-life, low maintenance, dependable exit sign in those conditions when reliability is crucial. The injection molded, clear, polycarbonate provides protection against vandalism. The UX Exit is approved for ambient environments rated from -45C (-49F) up to +60C (+140F).

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- Watchguard EMS Self-Diagnostic System
- Dual Voltage Input 120/277 VAC, 60 Hz, Isolation Transformer
- Push-in AC power connectors facilitate installation
- Line-latching
- Solid-state Voltage Limited Charger
- 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

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
- Powder coat paint 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
- Exit back plate can be removed and exit converted to double face exit
- T-Code=T5 (HAZ only)

Lamp Data

- LED lamp provides uniform light output
- Red or green lettering only
- Extremely economical lamp operation
- DC: LED Lamps

Code Compliance

- UL 924 Listed Self Diagnostics
- UL 924, Outdoor Wet Location Listed (suitable for wet and damp locations)
- UL50, NEMA 4X

- UL844, Hazardous Locations (Class 1, Division 2, Groups A, B, C, D) with "HAZ" option
- 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
- Patents Pending

Warranty

- Exit: 5-year
- Battery: 15-Year Pro-rata

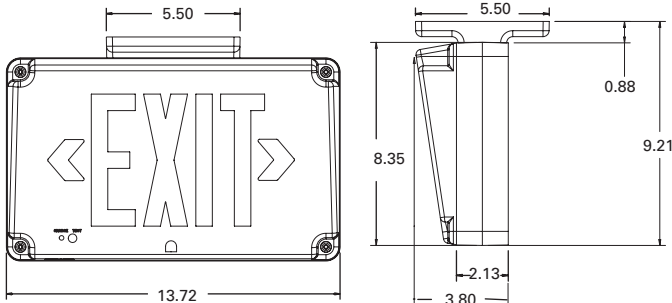
Temperature Performance Data

- UX Series Exit Sign:
 - -45°C (-49°F) to 60°C (140°F)
 - UX-HAZ Hazardous Location Exit Sign:
 - T6 rating at 45°C (113°F)
 - T5 rating at 60°C (140°F)



UX SERIES

- ULTIMATE EXIT
- NEMA 4X
- OPTL: CLASS 1 DIV 2
- HAZARDOUS LOCATION
- PENDANT AND UNIVERSAL
- SURFACE MOUNT
- SELF POWERED
- LED LAMPS
- VANDAL PROOF
- WATCHGUARD EMS
- SELF-DIAGNOSTIC SYSTEM
- PATENT PENDING
- EXIT LIGHTING



ORDERING INFORMATION

SAMPLE NUMBER: UX60R

Series	Face Options	Factory Options	Letter Colors	Housing Finish
UX7=Nema 4X Exit, Self Powered, LED	0=Universal ¹ 1=Single	00=No Options 90=DC Only Fire Alarm Interface	R=Red G=Green	=Silver WH=White BK=Black
Options	Accessories ²			
HAZ=Hazardous Location (Class 1, Division 2, Groups A, B, C, D)	LASER=Key Chain, Red Laser Pointer UXUK=Converts Single Face to Double Face Exit. Contains (1) Red Lens, (1) Green Lens, (1) Standard Silver Exit Stencil, (1) Vandal Shield w/Tamperproof Screws UXUKWH=Converts Single Face to Double Face Exit. Contains (1) Red Lens, (1) Green Lens, (1) White Exit Stencil, (1) Vandal Shield w/Tamperproof Screws	UXUKBK=Converts Single Face to Double Face Exit. Contains (1) Red Lens, (1) Green Lens, (1) Black Exit Stencil, (1) Vandal Shield w/Tamperproof Screws UXPKA=Pendant Adapter Kit (fitting adapts exit to 1/2" NPT threaded pendant-supplied by others) VRSD=Vandal Resistant Screwdriver		

Notes: 1. Contains one single face exit and one UXUK. 2. Order separately.

ENERGY DATA

Maximum power consumption under all charge conditions:

Sealed Nickel Cadmium Battery

LED Exits - Red	LED Exits - Green
Input Power: 120V = 3.4W 277V = 3.2W	Input Power: 120V = 3.1W 277V = 3.0W

Input Current (Max.):	Input Current (Max.):
120V = .07A 277V = .04A	120V = .08A 277V = .04A

Power Factor:	Power Factor:
120V = >.37 277V = >.39	120V = > .34 277V = > .36

T.H.D.:	T.H.D.:
120V = <64% 277V = <69%	120V = < 63% 277V = < 67%

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 silver 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 NEMA 4X enclosure.

Canopy

Die cast aluminum alloy canopy included for universal mounting. Canopy is included for mounting convenience only—no electrical components in canopy.

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 self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every six months. A 30 second battery power simulation test will occur every 30 days. The charger function is tested upon initial power-up and after every battery discharge cycle thereafter. The exit lamp circuit and AC/DC power transfer circuit

is monitored continuously. The charging mode is also monitored. The unit goes into a high charge mode for 24 hours the first time AC power is applied and when a discharge causes the battery voltage to fall below its nominal value. Pressing the test switch causes the unit to use battery power and test the battery capacity for 30 seconds. The LED indicator is off when the unit is in the emergency mode and on continuously when the unit is fully charged. The LED blinks when the unit is in the high charge mode. It blinks twice (then repeats) when the battery needs to be replaced, or if it is disconnected. It blinks three times if there is a circuit board (charger or AC/DC transfer function) failure, and four times if the exit lamps fail.

Line-Latched

Sure-Lites' line-latched electronic circuitry makes installation easy and economical. A labor efficient AC activated load switch prevents the lamps from turning on during installation to a non-energized AC circuit. Line-latching eliminates the need for a contractor's return to a job site to connect the batteries when the building's main power is turned on.

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.

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 located on the side of the exit 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 with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures. The specially designed resealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

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 fifteen-year pro-rata warranty.

NATIONAL ELECTICAL 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
1	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)