



# Unity Series

120VDC Central Single Source  
Emergency Lighting System

Project/Location:	_____
Contractor:	_____
Date:	_____
Prepared by:	_____

## Time and labour saver only one conduit required!

In an existing or new installation where exit signs and emergency lighting may be supplied by a single 120VDC source using a common negative wire, one normally on positive and one normally off positive. 3 wire output from the system reduces the number of conductors by up to 40%. It also eliminates 50% of the conduit, EMT or BX runs by using a single common conduit for LED exits and emergency lighting remotes.

## FEATURES

- Single-source 120VDC supply for both exit and emergency lights
- Reduced number of conductors
- Eliminates 50% of conduit, BX or EMT runs for exit and emergency lighting
- Control and supervision functions on single modular board
- Complete package of full supervisory functions and alarms included in standard unit
- Floor-mount cabinet
- Battery is sealed maintenance free lead calcium
- All **Unity Series** systems are designed and manufactured in Canada
- CSA and Ontario Hydro approved
- BMEC (Building Materials Evaluation Commission) approved for compliance to the Ontario Building Code
- Overall reduction on power consumption using LED Exit Signs

## OPERATIONS

**Unity Series** Central Emergency Lighting Systems are available in free-standing cabinet style enclosures

- Heavy duty, sheet-steel cabinet
- Cabinets are painted ASA No. 61 grey electrolyte resistant enamel
- Locking and hinged front door
- Front access to battery charger for ease of inspection and servicing

## CHARGER CONTROLS

**Emergi-lite**'s solid state fully automatic charger features single module control board design. This feature provides cost effective superior performing equipment, with ease of maintenance and service ability.

## DISTRIBUTION OPTIONS

A separate distribution panel is available for all systems. A choice of fuses or circuit breakers is available. Fuse Distribution Panel Select -OPF ( ) for separate distribution fuse panel. Select -OFA ( ) for separate distribution fuse panel with visual and audible alarm on main console for failure of any fuse.

Note: "( )" indicates the number of circuits required.

Circuit Breaker Distribution Panel Specify - CBO ( ) for separate circuit breaker panel. Specify - OCA ( ) for separate circuit breaker panel with visual and audible alarm on main console for tripping or opening of any breaker.

## STANDARD FEATURES AND CONTROLS

- LVD at 91% of nominal
- Temperature Compensation
- Ground Fault Alarm (Audible & Visual)
- DC Volt & Ammeter (2% Accuracy)
- AC present LED indicator
- Float level Charge LED indicator
- Equalize level Charge LED indicator
- Charger Failure Alarm
- AC Failure Alarm
- High Battery Voltage Alarm
- Test Switch
- Remote Monitor Alarm Panel
- Brownout Protection
- Dry Contacts
- BMEC - Ontario Building Materials Evaluation Commission Approved
- SPF - sprinkler-proof cabinet comes with drip shield

## OPTIONAL FEATURES CODE

• Time Delay	TD
• 3 Phase Sensing	3PH
• 12 Hour Recharge	12HR
• Battery exerciser	CYC
• Input battery circuit breaker	BCB
• Common Zone sensing	ZSC
• Individual Zone sensing	ZSI

## APPLICATION

New construction or retro-fit, the **Unity Series** utilizes the latest technology and engineering to reduce the cost of emergency lighting installations. The unique 3 wire design allows for the use of just one conduit. With one positive dc normally energized conductor and a common negative conductor the LED exits are supplied constant power. With the same common negative conductor and another positive DC conductor the remote emergency lights are powered on demand. Available in sizes from 4120W to 22520W for 30 minutes. Other runtimes available. Please consult factory.

## ELECTRICAL

**Input:** 120V, 208V, 240V, 277V, 347V, 600VAC 60HZ Single Phase

**Output:** 120VDC 3 wire (normally on positive, common negative and normally off positive).

Systems have been designed for minimum 1/2 hour operation time and are capable of full recharge in 24 hours. For systems rating chart and ordering guide please see next page. Other discharge times are available upon request.



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## WARRANTY

The complete system is guaranteed for a period of one (1) year against defects in workmanship and materials. The battery portion of the equipment carries a ten (10) year pro-rata warranty during its useful service life against defects in workmanship and materials. The battery warranty is subject to the provision of normal testing and inspection as specified in the Canadian Electrical Code, Section 46-102, and National Fire Code of Canada. Limit room ambient temperature between 20°C to 25°C (68°F to 77°F). Optimum system performance occurs at 25°C (77°F). A battery service life is defined as the period which the battery could still provide at least 80% of its rated capacity.

## APPROVALS

- CSA Certified
- Ontario Hydro: Rule 46-108 (3)

## ENCLOSURE DIMENSIONS

SYSTEM SERIES	H X W X D
UNI 4120	38" (96.5 cm) x 38" (96.5 cm) x 18" (45.7 cm)
UNI 5660-11260	38" (96.5 cm) x 38" (96.5 cm) x 28" (71.1 cm)
UNI 13140-22520	56" (142.2 cm) x 38" (96.5 cm) x 28" (71.1 cm)

## UNIT RATING

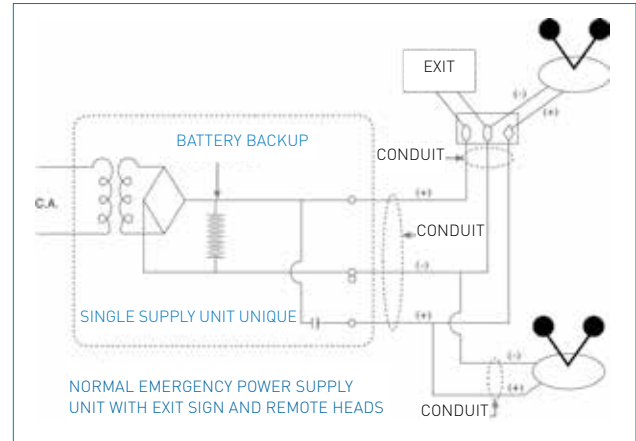
**SL Series batteries:** maintenance free, sealed Lead-Calcium. Watts at 91% of nominal voltage.

CAPACITY IN WATTS	30 MIN	1H00	1H30	2H00
UNI 4120	4 120	2 450	1 790	1 440
UNI 5660	5 660	4 015	2 935	2 355
UNI 9390	9 390	5 590	4 080	3 290
UNI 11260	11 260	6 700	4 890	3 940
UNI 13140	13 140	7 820	5 710	4 600
UNI 18780	18 780	11 180	8 160	6 580
UNI 22520	22 520	13 400	9 780	7 880

## ORDERING INFORMATION

SYSTEM DESIGNATION	A.C. INPUT VOLTAGE (1PH)	BATTERY TYPE	CAPACITY IN WATTS	QTY OF EXIT SIGNS	MOUNTING	D.C. OUTPUT VOLTAGE	OPERATING TIME	DISTRIBUTION OPTIONS	OPTIONS
UNI	120= 120VAC 208= 208VAC 240= 240VAC 277= 277VAC 347= 347VAC 600= 600VAC	SG = sealed Lead Calcium	_____*	100E= 100 Exit Signs	C= Console	120= 120VDC	30= 30 minutes 60= 60 minutes 90= 90 minutes 120= 120 minutes	OPF()= fuse panel* OFA()= fuse panel with alarm CB0()= circuit breaker panel* OCA()= circuit breaker panel with breaker trip alarm *Specify number of circuits	TD= Time delay (15 minutes) 3PH= 3 phase sensing 12HR= 12 hour recharge CYC= Battery exerciser BCB= Battery circuit breaker ZSC()= Common zone sensing* ZSI()= Individual zone sensing* * Specify No. of zones.

## TYPICAL INTERCONNECTION WIRING DIAGRAM



CAD Drawing illustrates how the Unity Series is applied, saving time, material and money. Call your local Emergi-Lite® Representative for further information, or application assistance.

