

GENERAL DESCRIPTION

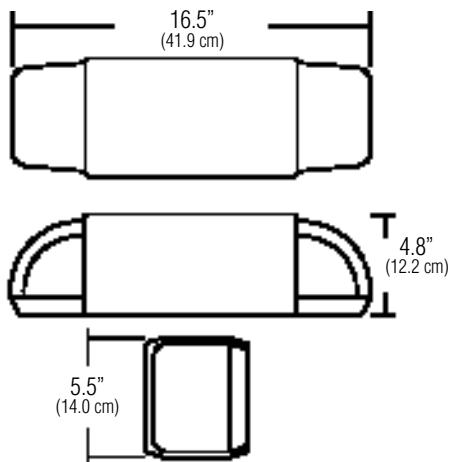
The Symmetry Series is a reliable, economical, contemporary emergency lighting product suitable for wall mounting. Integral, adjustable lamps will provide efficient emergency lighting, and will not detract from the aesthetics or design of retail, office or commercial spaces.

ILLUMINATION

Illumination is provided by two high performance lamp reflector systems integral to the housing. Each lamp reflector system can be adjusted 180° vertically, and 90° horizontally. The standard lamp reflector system incorporates a high intensity 9.0 watt, T-5 wedge base tungsten lamp. A high impact polycarbonate diffuser controls sight-line glare, and maximizes reflector efficiency. Choice of tungsten, halogen and MR-16 high performance lamps are also available.

When mounted on 20' centers (9' AFF) the Symmetry Series will provide an average of one footcandle along a linear path of egress. IES photometric files are available upon request.

DIMENSIONS



Symmetry Series

Contemporary Emergency Lighting

12 Volt, 36 - 72 Watt Units

Sealed Lead Calcium or Nickel Cadmium Battery

HOUSING

Constructed of impact resistant, UL 94 V-0, 5 VA thermoplastic.

White housing is standard, with an optional black housing available.

Thermoplastic backplate is provided with matching knockouts for easy installation to standard junction boxes.

Installation is further simplified by the use of a snap-together backplate and housing.

A modular plug-in wiring harness will allow line voltage connections in either the junction box or product housing.

Utility supply connection is completed by snapping the housing and backplate together forming a secure mechanical and electrical connection. Batteries are factory installed, and do not require connection prior to energizing the input.

ELECTRONICS

120/277 VAC dual voltage input with surge-protected, solid-state charging circuitry provides for a reliable charging system.

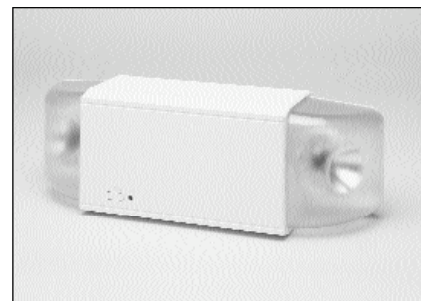
Charging system is complete with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp, test switch and high rate of charge indicator.

Optional ACCU-TEST self-diagnostics includes an automatic 3 minute discharge test every 30 days. A manual test is available from 1 to 90 minutes.

PERFORMANCE

Input power requirements

36 to 50W	120 VAC: .10 amps, 12 watts
	277 VAC: .04 amps, 11 watts
72W	120 VAC: .39 amps, 46.8 watts
	277 VAC: .17 amps, 47.9 watts



SHOWN: S1236LT9W

BATTERY

Maintenance free, sealed lead calcium battery provides 90 minutes of emergency power, and has an estimated service life of 5 years when operated at an ambient temperature of 65°F (19°C) to 85°F (30°C).

An optional maintenance free, sealed nickel cadmium battery is available and has an estimated service life of 10 years when operated at an ambient temperature of 20°F (-7°C) to 95°F (35°C).

CODE COMPLIANCE

UL 924 listed, UL damp location listing optional NFPA 101, NECI

Damp location available on the following models: S1236L, S1250N

WARRANTY

Three year full electronics warranty

One year full plus four year prorated lead calcium battery warranty

Five year full plus five year prorated nickel cadmium battery warranty

ORDERING INFORMATION

S12

SERIES/ VOLTAGE

S12 = 12 Volt, Symmetry Series
Thermoplastic
Emergency Lighting
Unit

36L

BATTERY/ WATTAGE

Lead Calcium
36L = 36 Watt Unit
50L = 50 Watt Unit
72L = 72 Watt Unit
Nickel Cadmium
50N = 50 Watt Unit

T9

LAMP TYPE¹

T9 = Tungsten 9W
T12 = Tungsten 12W
T18 = Tungsten 18W
H12 = Halogen 12W
H20 = Halogen (MR-16) 20W

W

HOUSING COLOR

W = White
B = Black

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FACTORY INSTALLED OPTIONS²

A = Ammeter^{3,4}
ACF1 = 120 VAC Fuse
ACF2 = 277 VAC Fuse
ACP1 = 120 VAC Power Switch
ACP2 = 277 VAC Power Switch
AD = ACCU-TEST Self-Diagnostics
ADTD = ACCU-TEST with Time Delay⁵
DCP = DC Power Switch
DL = UL Damp Location Listing (S1236L & S1250N only)⁴
EX = Special Input Transformer (220/240 VAC, 50 Hz)
V = Voltmeter^{3,4}

NOTES:

- 1) Selected lamp wattage cannot exceed unit output rating.
- 2) Some option combinations may impact UL listing. Consult factory for specifics.
- 3) Must select either voltmeter or ammeter, but not both.
- 4) Not available with AD or ADTD options
- 5) 15 minute delay



A2528



ISO 9001

Chloride Systems

Specification Data for Symmetry Series 12 Volt, 36 to 72 Watt Emergency Lighting Unit

HOUSING

Constructed of impact resistant, UL 94 V-0, 5 VA thermoplastic.

White housing is standard, with an optional black housing available.

Provisions are available for utility supply via 1/2" surface conduit, and are located on the top, left portion of product housing.

Space is available inside the product housing to contain and isolate line voltage terminations.

When product is mounted to a standard junction box, flying leads connected to the backplate are connected to the line voltage supply inside the junction box.

Final electrical connection is made by snapping the housing and backplate together, which allows a modular plug set to complete the supply power connection.

Batteries are installed and connected to the charger system at the factory. The batteries are isolated from the charging system, and will not receive charge current, or discharge until initially energized.

PERFORMANCE

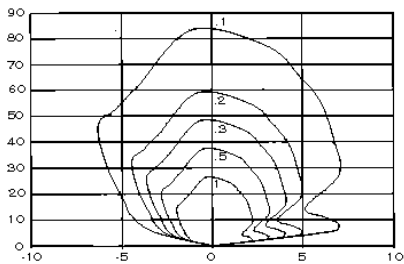
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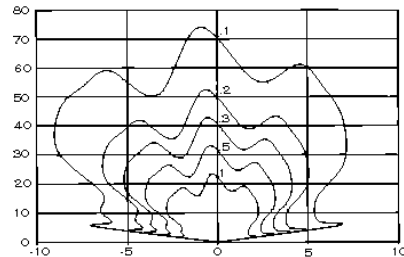
LAMP HEAD PHOTOMETRICS

T9 Lamp

HORIZONTAL



VERTICAL



See Chloride Technical Information section for photometric performance of lamp types not illustrated.

ELECTRONICS

120/277 VAC dual voltage input with surge-protected, solid-state charging circuitry provides for a reliable charging system. The charging system is furnished with low voltage disconnect, AC lockout, brownout protection, AC indicator lamp, test switch, and high rate of charge indicator.

The low voltage disconnect (LVD) feature will disconnect the battery prior to an unacceptable deep discharge, but not before the required 90 minute emergency operation.

The AC lockout feature prevents battery drain prior to the initial energizing of utility power, and allows the installer to complete all wiring and electrical connections without energizing the emergency circuit.

The brownout protection circuitry will automatically switch the unit into the emergency mode if the utility voltage sags below 20% of nominal.

Battery charging circuitry is entirely solid-state, and utilizes a fully automatic, voltage regulated charger for lead calcium batteries, and an automatic constant current charger for nickel cadmium batteries. Battery recharge time after full discharge is less than the required UL 924 standard.

Line sensitive electronics cause an instantaneous transfer to battery power if utility power is lost, or a brownout condition is detected. When line voltage is present and stabilized, the transfer circuitry switches back to normal operation and begins recharging the battery. The transfer circuitry can be tested via a momentary test switch located on the housing.

CODE COMPLIANCE

The Symmetry Series product meets or exceeds all performance standards as required by UL 924, NFPA 101, NEC and OSHA.

ACCESSORIES (ordered separately)

WG5 = Wire Guard
PCS1 = Polycarbonate Vandal Shield

SELF-DIAGNOSTICS

The optional ACCU-TEST self-diagnostics includes an automatic 3 minute discharge test every 30 days. A manual test is available from 1 to 90 minutes. Real-time system checks occur automatically every minute. Individual LED indicators illuminate red if either a battery, charger or lamp failure occurs.

BATTERY

Maintenance free, sealed lead calcium or nickel cadmium batteries are available. Standard sustained emergency operation is for 90 minutes, with the illumination source providing full light output. Remote capacity and extended run times are available with selected models.

Periodic testing of the unit (for three minutes, every 30 days) is encouraged to ensure compliance with most local fire codes, and will not adversely affect service life of the battery.

The suggested operating temperature range for sealed lead calcium battery products is 65°F (19°C) to 85°F (30°C), and the battery has an expected service life of 5 years. The suggested operating temperature range for sealed nickel cadmium battery products is 20°F (-7°C) to 95°F (35°C), and the battery has an expected service life of 10 years.

OPERATION

DC Voltage	Unit	Watts to 87½ of Rated Voltage*			
		1½ hrs.	2 hrs.	4 hrs.	8 hrs.
12	S1236LT9W	36.0	27.0	14.0	7.2
12	S1250LT9W	50.0	37.5	19.0	10.0
12	S1272LT9W	72.0	56.5	28.5	15.0
12	S1250NT9W	50.0	37.5	19.0	10.0

* Per NEC Specifications

REMOTE LAMP ASSEMBLY



ST912 = 9 W, 12 VDC, Tungsten
ST1212 = 12 W, 12 VDC, Tungsten
ST1812 = 18 W, 12 VDC, Tungsten
SH1212 = 12 W, 12 VDC, Halogen
SH2012 = 20 W, 12 VDC, Halogen

SUGGESTED SPECIFICATION

Furnish and install Chloride Systems decorative emergency lighting model _____. The unit shall be constructed to meet Underwriter's Laboratories, Inc. Standard #924 and must be installed to conform to Article 700 of the National Electrical Code (NEC).

INSTALLATION AND OPERATION - Unit shall be easily field connected to a 120 or 277 VAC, 60 hertz, unswitched power source. Installation must comply with the NEC as well as other applicable codes. Upon utility power failure or brownout, the unit shall automatically provide emergency battery power and maintain the stated illumination level and output wattage for a minimum period of 90 minutes. Upon restoration of utility power, the charging circuitry shall restore the battery to full charge within UL 924 requirements following a rated discharge of not more than 90 minutes.

CHARGING CIRCUITRY - Unit shall utilize either a fully automatic, voltage regulated (lead calcium) or constant current (nickel cadmium) charging system. The charging system shall maintain the battery at full capacity without the need for periodic exercising or equalization. The following features shall be standard: Low voltage disconnect (LVD), brownout protection and AC lockout. Optional self-diagnostics shall monitor and indicate a fault occurring in either the charger, battery, lamp circuit, or input supply.

BATTERY - The battery shall be either maintenance free, sealed lead calcium or sealed nickel cadmium. The sealed lead calcium battery shall provide trouble-free operation in temperatures up to 85°F (30°C) and is supplied with a three year full warranty. Nickel cadmium batteries shall provide trouble-free operation in temperatures up to 95°F (35°C) and are supplied with a five year full warranty.

ILLUMINATION - Illumination is provided by two internally mounted, fully adjustable reflector systems utilizing either a high output tungsten, or tungsten halogen lamp source. Reflectors shall be constructed of a high efficiency parabolic lamp chamber which can utilize lamp wattages up to 20 watts. When mounted on 20' centers, at 9.0' AFF the product shall provide an average of one footcandle along a linear path of egress.

HOUSING - Housing construction shall be impact resistant UL 94 V-0, 5 VA rated thermoplastic. Product shall be furnished with the standard white, or black finish. Units shall be designed to mount to 3/4", 4" octagon, or 4" square junction boxes and will be supplied with a knockout pattern to facilitate mounting. Modular utility supply connectors integral to the backplate and housing shall eliminate hardwire line voltage terminations inside of the product housing. The housing and backplate shall snap together without the use of tools, and shall contain a factory installed battery which does not require internal connection prior to energizing the product.