

FEATURES & SPECIFICATIONS

INTENDED USE — Provides minimum of 90 minutes of illumination for rated wattage upon loss of AC power. Unique design for heavy and demanding industrial applications such as manufacturing plants, refineries, chemical plants, wastewater treatment facilities, food processing facilities, breweries, loading docks, and other applications subject to wash-down or industrial conditions. Superior performance lamp heads are ideal for higher mounting heights.

CONSTRUCTION — **U.S. Patent No. D505,222 - Design patent.** Rugged, heavy-duty, polycarbonate clear housing lens and polycarbonate housing are sealed, gasketed, and corrosion-resistant. Unique vertical orientation is perfect for mounting to a pole, column, wall, I-beam or unistrut. Install with epoxy-coated, corrosion-resistant, 12-gauge steel mounting bracket shipped standard. Conduit entry points located on both sides of unit. **U.S. Patent No. 6,135,624 - mounting bracket utility patent.** Maintenance is easy with hinged front cover, printed circuit board mounting shelf and battery belt.

OPTICS — **U.S. Patent No. 6,193,395 - lamp head utility patent.** Full range of lamp options available from 20W to 50W in sealed-beam or halogen lamps. Composite lamps feature unique field adjustable beam spread (by turning lamp bezel). Available with 5W linear pattern LED lamps from 6V to 12V.

ELECTRICAL — Dual voltage input capacity (120/277V).

Brownout protection is a standard feature of self-diagnostics.

AC/LVD reset prevents battery damage from deep discharge.

Current limiting charger.

Thermal protection prevents overheating and charger failure.

Thermal compensation provides optimum charge voltage relative to ambient temperature.

Battery: Sealed, maintenance-free, lead-acid (SLA) battery with capacity of 18W to 100W for 90 minutes of emergency operation of 6V and 12V units.

P2 option offers high-temperature batteries (DM90X618, DM90X12100 only). UL listed from 32° F to 131° F (0° C to 55° C).

Low voltage disconnect prevents excessively deep discharge that can permanently damage battery.

Diagnostics (with P1 and P2 options): **U.S. Patent No. 6,502,044 - Self-Diagnostics utility patent.**

Test switch provides manual activation of 30 second diagnostic testing (for on demand visual inspection).

Single multi-chromatic LED indicator displays two-state charging, test activation and three-state diagnostic status.

Self-diagnostic testing for five minutes every 30 days and 30 minutes every six months. Diagnostic evaluation of lamp, AC to DC transfer, charging and battery condition.

Load learning capability self-calibrates to DC load at first test, enabling it to detect a lamp failure on future tests. May be re-calibrated at any time by holding down test switch for 15 seconds.

INSTALLATION — Wall and pole mounting standard (12-gauge steel mounting bracket included). Other mounting options available for ceiling mount or I-Beam mounting (see accessories).

LISTINGS — UL Listed. Meets UL 924, UL50, NFPA 101 (current Life Safety Code), NFPA 70-NEC, and OSHA illumination standards. Wet, NEMA 4, 4X rated. IP66 and NSF Listed. Meets FCC Title 47, Part 15, Subpart B.

Catalog Number
Notes
Type

NEMA 4X Emergency Lighting Unit

DeSoto M90X

**6 or 12 Volts
Sealed Lead-Acid (SLA)
or Ni-Cad Battery**



DM90X (with high performance LEDs)

WARRANTY — 3-year limited warranty. (Battery is prorated. 5-year prorated warranty on ni-cad batteries.) Complete warranty terms located at:

http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25°C.

Specifications subject to change without notice.

ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

Example: DM90X618 LP05VS P1

Series	Housing color	Lamp type (2 heads)	Options
6 Volts DM90X618 18W ¹ DM90X654 54W ² 12 Volts DM90X1254 54W ² DM90X12100 100W ³	(blank) Gray	<u>LT24 LED</u> LP05VS Linear pattern 5W voltage-sensing 6V to 12V <u>6 Volts</u> PAR36 Composite H2006 20W/6V halogen <u>12 Volts</u> PAR36 Composite H2012 20W/12V halogen PAR36 Sealed-Beam H5012S 50W/12V halogen	(blank) Features remote test and time delay. UL listed for 50° F to 104° F (10° C to 40° C) P1 Features self-diagnostics, time delay, and remote test. UL listed for 50° F to 104° F (10° C to 40° C) ⁴ P2 Features high-temperature ni-cad battery (DM90X618 only) or high-temperature lead-acid battery (DM90X12100 only), self-diagnostics, time delay, remote test. UL listed for 32° F to 131° F (0° C to 55° C) ^{4,5} USPOM Assembled in the US

Accessories: Order as separate catalog number

ELA DM RTT	Remote test transmitter ⁴
ELA WG4/8	Wireguard (see spec sheet ELA-DM-PM-CM-WG)
ELA BS	Banding Strip (see spec sheet ELA-DM-RTT-BS)
ELA DM90X CM2	Ceiling mount kit for DM90X654/1254 (see spec sheet ELA-DM-PM-CM-WG)
ELA DM90X N0806	Single remote head, PAR36 sealed-beam 6V8W incandescent lamp ⁶
ELA DM90X T N0806	Twin remote head, PAR36 sealed-beam 6V8W incandescent lamps ⁶

NOTES:

- DM90X618 does not have remote lamp capability.
- Ceiling-mount installations require ELA DMX CM2 mounting kits.
- DM90X12100 available with the P2 package only.
- Must order a Remote transmitter (ELA DM RTT) sold separately. One per job required. See spec sheet [ELA-DM-RTT-BS](#).
- Only available on DM90X618 and DM90X12100.
- See spec sheet [ELA-DM802-DM90X](#) for additional remote heads available.

DeSoto M90X NEMA 4X Emergency Lighting Units, 6/12 Volts

SPECIFICATIONS

ELECTRICAL: Primary Circuit								
Type	Volts	AC Input Amps ¹	Watts ¹	Output Volts	1-1/2 hrs.	2 hrs.	3 hrs.	4 hrs.
DM90X618	120	.093	19.56	6	18	13.5	9	6
	277	.041	19.11					
DM90X654	120	.171	20.64	6	54	40	27	20
	277	.073	20.78					
DM90X1254	120	.174	20.88	12	54	40	27	20
	277	.078	21.61					
DM90X12100	120	.160	20.88	12	100	75	50	37.5
	277	.072	20.55					

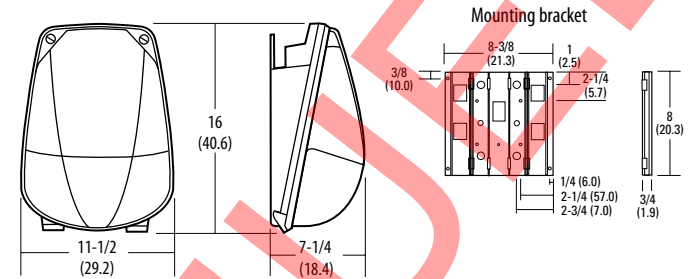
MOUNTING

All dimensions are inches (centimeters).

Shipping weight:

DM90X618 - 16 lbs. (7.3 kgs) DM90X1254 - 20 lbs. (9.1 kgs)

DM90X654 - 20 lbs. (9.1 kgs) DM90X12100 - 36.5 lbs. (16.6 kgs)



BATTERY

High-Temperature Nickel-Cadmium				
Voltage	Shelf life ²	Typical life ³	Maintenance ⁴	Temperature range ⁵
6/12	3 yrs.	7-9 yrs.	none	32°-131°F (0°-55°C)
Lead-Acid (SLA)				
Voltage	Shelf life ²	Typical life ³	Maintenance ⁴	Temperature range ⁵
6/12	1 yr.	3-5 yrs.	none	50°-104°F (-10-40°C)
High-Temperature Lead-Acid (SLA)				
Voltage	Shelf life ²	Typical life ³	Maintenance ⁴	Temperature range ⁵
6/12	1 yr.	5-7 yrs.	none	32°-131°F (0°-55°C)

NOTES:

- For ULT option consult factory for input power factor, if required.
- At 77°F (25°C).
- Based on normal room temperatures and conditions.
- All life safety equipment, including emergency lighting for path of egress must be maintained, serviced, and tested in accordance with all National Fire Protection Association (NFPA) and local codes. Failure to perform the required maintenance, service, or testing could jeopardize the safety of occupants and will void all warranties.
- Optimum ambient temperature range where unit will provide rated capacity for 90 minutes. Higher and lower temperatures affect life and capacity.

MULTIPLE UNIT SPACING – WALL-MOUNT

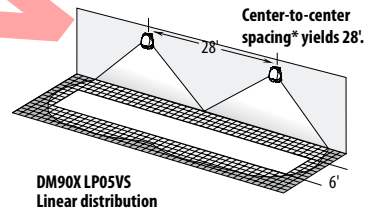
Mounting Height	7.5'	10'	12'	14'	16'	18'	20'
Max Spacing @ 1 FC Avg	37'	42'	40'	33'	27'	23'	18'

* Reference DM90X LP05VS (LT24) (LEFT, AIMED IN-30 DEG) and DM90X LP05VS (LT24) (RIGHT, AIMED IN-30 DEG) files.

**All spacings shown for traditional lamp sources use medium distributions. For additional spacing information, see the complete list of DeSoto M90X files.

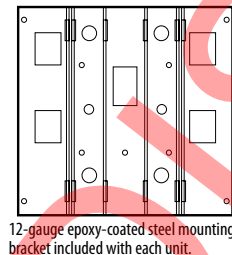
***Based upon an average of 337.5 lumens per lamp for a total of 675 delivered lumens. Estimate assumes 12V battery with lamps aimed IN-30-DEG.

PERFORMANCE DIAGRAMMS

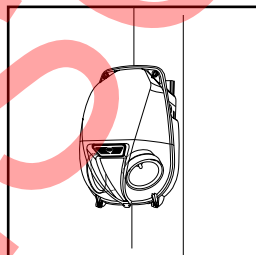


*NOTE: Meets Life Safety Code standard minimum illuminance of 0.1 FC and average illuminance of 1.0 FC. Assumes space of 200'L x 200'W, mounting height: 16', ceiling height: 30', and reflectances: 10/10/10. Analysis based on independently tested photometrics.

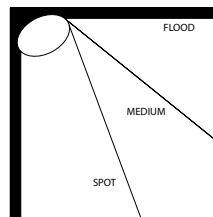
KEY FEATURES



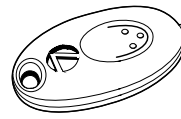
12-gauge epoxy-coated steel mounting bracket included with each unit.



Vertical orientation for pole or column mounting.



Field-adjustable beam pattern for composite lamps.



ELA DM RTT
Order remote transmitter separately.



DESOTO M90X