EVERGEN M SERIES

87502_MANUAL_SOL_EG320-340-EMS-Retrofit_RevB

IMPORTANT

Keep your product order information. You will need it during setup.

The EverGen lighting system must be activated after assembly and installation using the EverGen Setup App. Otherwise, the light will not turn on and an additional site visit will be required.

To complete activation:

1. Download the EverGen Setup App from the iOS App Store or Google Play store and ensure you have a compatible mobile device.

2. Use the signup tab to create an account.

3. A verification email will be sent to the email address you used to create the account. Open the email and verify your account.

4. Switch from the signup page to the login page and enter your email and password.

5. Once inside the EverGen Setup App workspace, enter your order number (ORDXXXXXX).

6. Go to the location of the EverGen lighting system, connect to the light and follow the Setup App to activate.

NOTE If you do not have wireless internet access onsite, use the app to download product information for your order before travelling to the offline site. Activation can then take place onsite without a wireless signal. Contact us for best practices for working in remote areas.

NOTE EverGen firmware may be periodically released to improve performance. Firmware updates are managed by the app during the initial connection. Updates are mandatory and the process takes about 45 seconds.

This installation and instruction manual provides installation instructions for the Sol EverGen Series solar LED lighting systems. The entire contents of this manual should be thoroughly reviewed and understood prior to installing this equipment. Do not discard this manual, as it contains complete installation instructions.

To ensure proper operation of this equipment, it is important that the equipment be used only for its intended purpose. Any use of this equipment for purposes other than those intended will void all warranties.

Warnings and Precautions

The following symbols indicate important safety warnings and precautions throughout this manual. They are defined as follows:

NOTE suggests optimal conditions under which the equipment will operate effectively and safely, or provides additional information to the reader.

CAUTION indicates that damage to equipment may result if the instructions are not followed.

WARNING indicates that serious bodily harm or death may result from failure to adhere to the precautions.

Warranty Disclaimer

This manual will familiarize you with the features, operation standards, and installation of Sol's EverGen M Series. Failure to comply with the use, storage, maintenance, installation or placement instructions detailed in this manual could void the warranty.

Standards

Perform all installation, wiring, and maintenance in conformance with local building and electrical codes. Adherence to the National Electrical Code (NEC) is mandatory. Non-adherence to code may void the warranty.

Safety and Usage Precautions

WARNING Batteries are shipped fully charged. Use extreme caution when handling the batteries as they are capable of generating hazardous short-circuit currents. Remove all jewelry (bracelets, metal-strap watches, etc.) before attempting to handle the batteries.

Solar modules produce DC electricity when exposed to light and can, therefore, produce an electrical shock or burn. To render solar modules inoperative, remove them from sunlight, or fully cover their front surface with an opaque material.

Before lifting any heavy or bulky equipment, ensure the load is secured so moving parts do not shift, and that it can be lifted as far as needed without back strain or loss of grip. Installation may require more than one person.

Until the system is ready for startup, keep the battery fuse out of the fuse holder. Ensure the equipment is not powered during installation and wiring of the system.
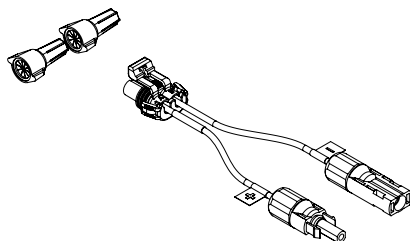
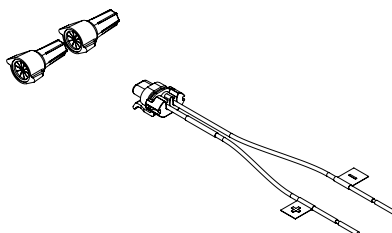Recheck all completed wiring for proper polarity prior to energizing the system.

NOTE Changes or modifications to Sol equipment not expressly approved by Sol could void the user's authority to operate the equipment.
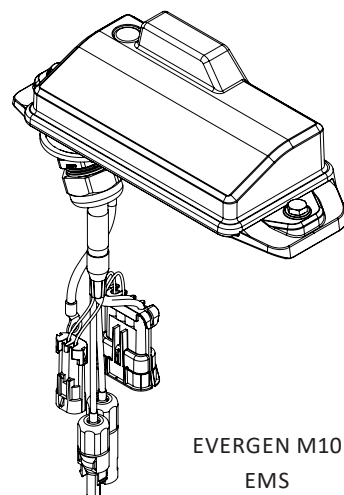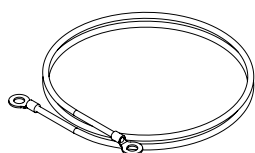
Introduction

Components

SOLAR ADAPTER HARNESS KIT
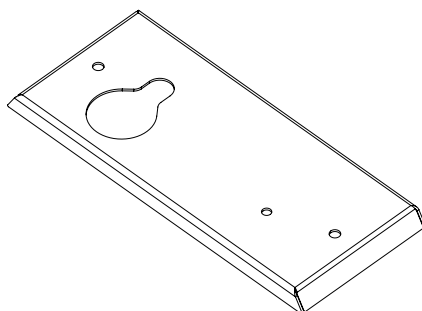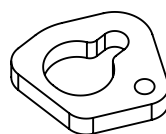(MAY NOT BE NEEDED)

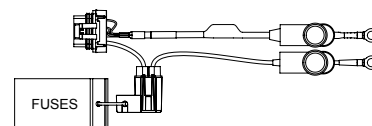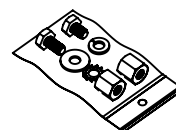FIXTURE HARNESS KIT

EVERGEN M10
EMS

GROUND HARNESS

EMS MOUNT BRACKET

GASKET

BATTERY HARNESS KIT (1-4
BATTERIES)

FUSES

HARDWARE KIT
(SOME HARDWARE MAY
NOT BE NEEDED FOR YOUR
SPECIFIC RETROFIT)

Tools and Equipment

Tools Required

a. 7/16 and 1/2 inch socket and wrench
b. Phillips screwdriver
c. 9/32" drill bit
d. 2" hole saw
e. Cordless drill
f. Wire cutters/strippers
g. Adjustable wrench
h. Deburring tool or sharp knife

Installation

In order to install your new EverGen EMS, you will need to gain access to the battery bucket. This can be done by removing the entire system from the top of the pole and servicing it on the ground. Otherwise, EG maintenance brackets (sold separately) can be used to tilt the panels out of the way allowing the system to be service atop the pole.

1   Install maintenance bracket on either end of the metal frame. Use existing bolt and washer to secure frame rail to maintenance bracket.

Secure Upper Bracket.
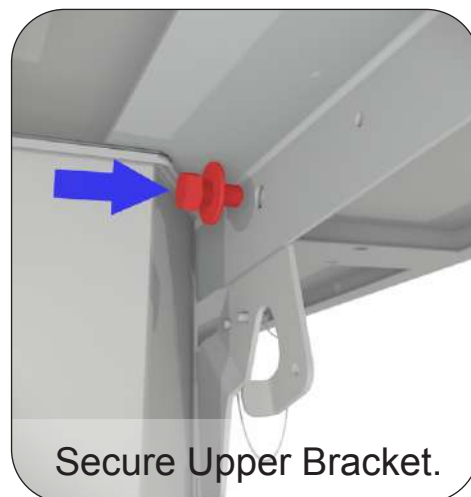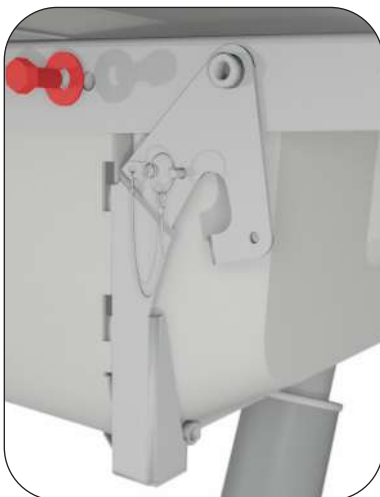
2   Rotate panels as shown. Once rail aligns with hole, insert supplied 1/4-20 bolt and secure in place with nut.

Rotate Solar Panels

Rail Aligns with Hole in Bracket
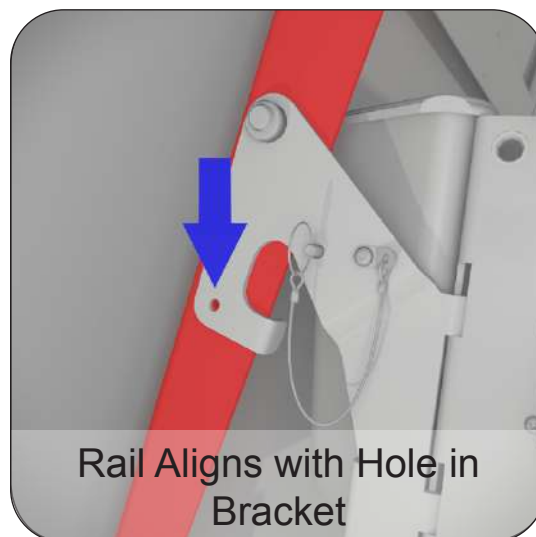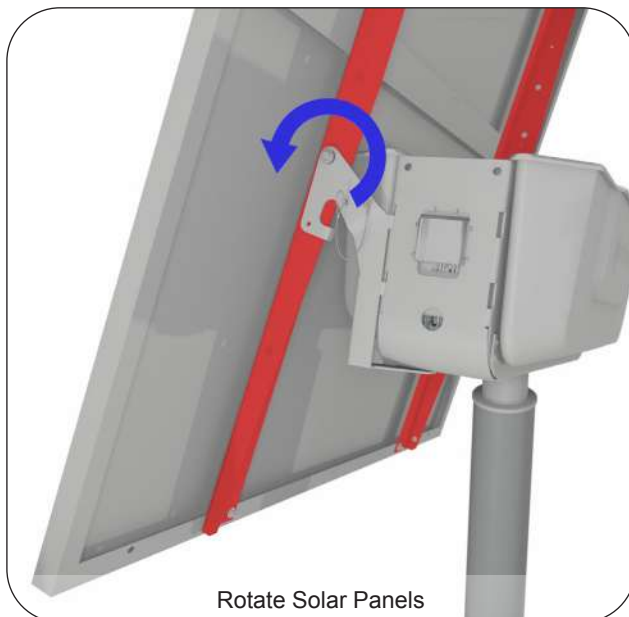
3   Once rail aligns with hole, insert supplied 1/4-20 bolt and secure in place with nut.

1   Once you have access to the battery bucket, proceed with the following steps.

A & B

A   Disconnect panels.

B   Remove battery harness fuse.

C   Remove battery terminal harnessing.

D   Unstrap and remove batteries. Set aside to reuse later, if needed.

C & D

2   Locate and disconnect or cut fixture harnessing wiring away from existing EMS. The fixture harness will be reused later.
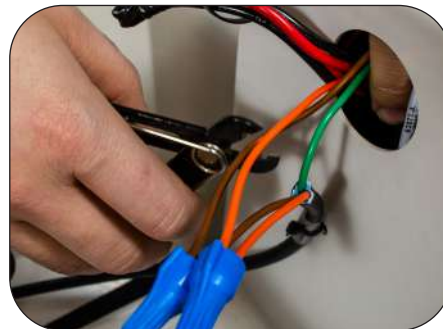
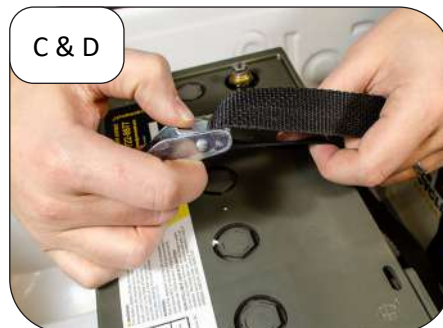**3**   The old EMS will remain attached to the channel. Cut all remaining harnessing entering the bucket from the old EMS. Wrap with electrical tape.

4   Do not cut optional grounding wire if installed. New EverGen EMS will be grounded to existing bar if it's in good shape.

5 Place EMS mounting plate with the flat side facing the plastic bucket. Placement should have the pilot hole enter the middle of the bucket. Use the top recessed edge above the logo to keep the plate aligned. Mark your two mounting holes and the hole saw pilot hole, then remove plate.

6 Drill mounting holes.

7 Using hole saw, drill a 2" hole into the bucket via the middle-marked spot. Take your time and drill carefully to avoid cracking the bucket, especially if it's a cold day.

NOTE **Replacement buckets are unfortunately no longer available, so take care when drilling.**
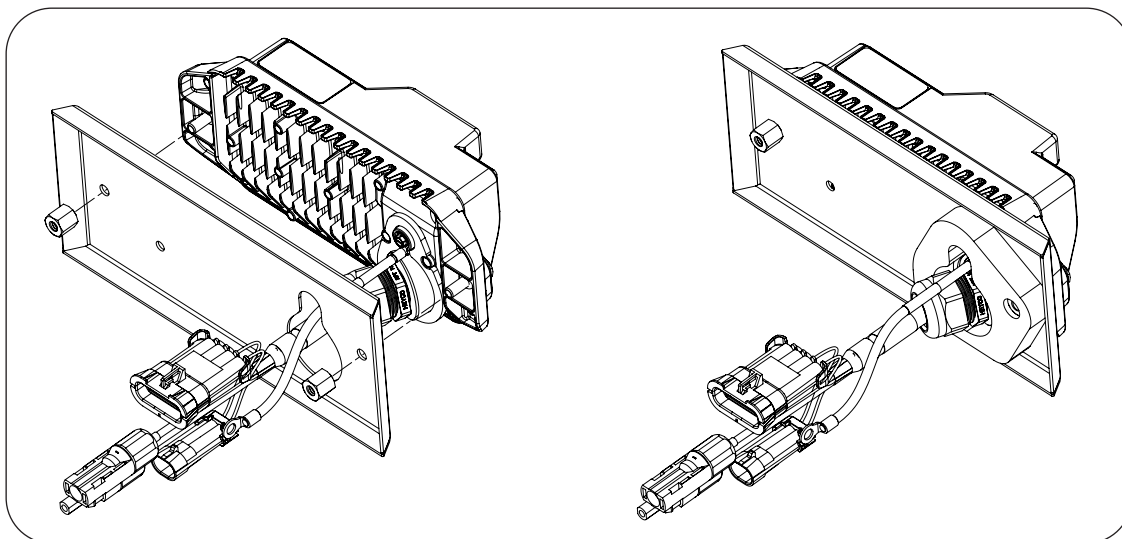

8 Remove any sharp edges from harnessing hole.

9   Assemble EMS onto adapter plate using the provided standoff nuts.

10   Install foam gasket around harnessing.

11   Mount EMS onto the outside of the bucket using the provided fender washer, split washer, and bolt. Snug bolts and do not over tighten.

12   All grounding wires should be combined into one. Cut and strip the grounding wire from the EMS.


13   Cut and strip one end of the provided grounding extension wire. Combine the EMS grounding wire, fixture ground wire, and the ground extension wire, and join using the provided waterproof wire connector.

14   If you are able to use the grounding block located on the channel, cut and strip the other end of the EMS's ground extension cable and screw it into an open spot in the terminal block.
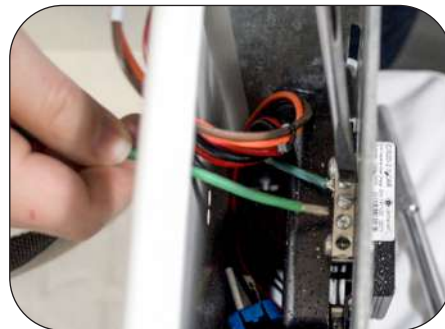
15   If you are not able to use the grounding block due to corrosion, keep the ring terminal and drill a hole in the channel just above the old EMS so it will not interfere with the panel mounts once reinstalled.
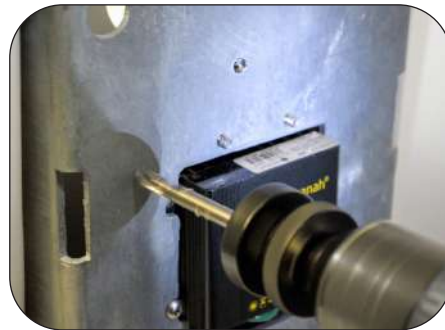
16   Secure with nut and bolt.

17.   Battery Harness Installation

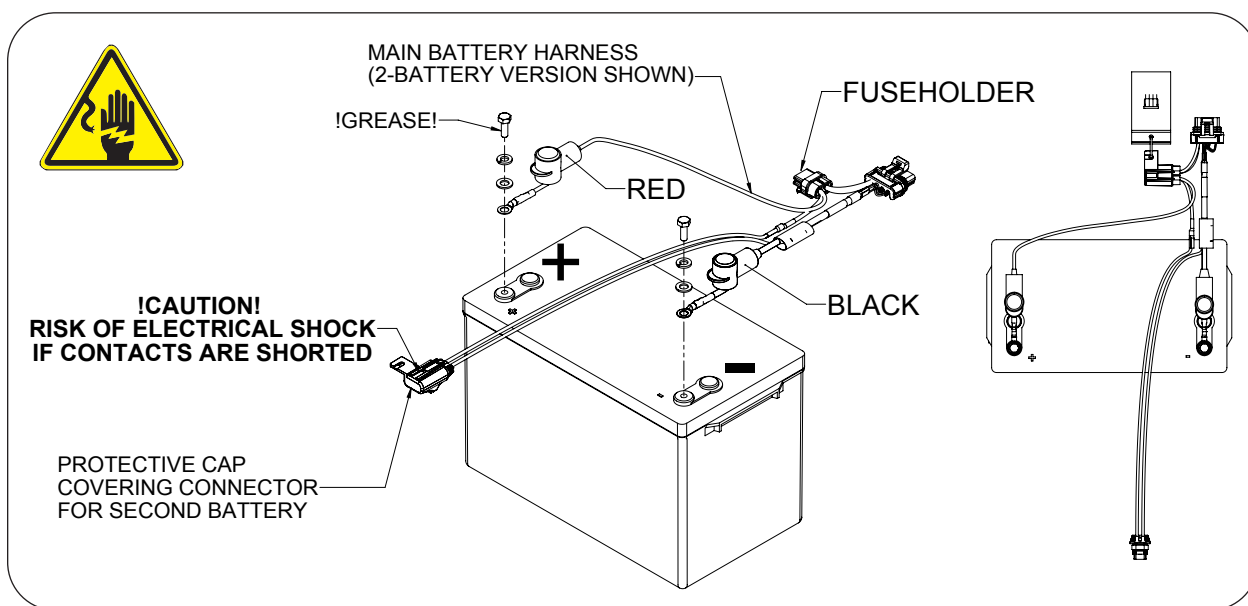**NOTE**   **CABLE CONNECTIONS VARY DEPENDING ON SYSTEM CONFIGURATION.**

WARNING   **RISK OF ELECTRIC SHOCK.**

1   While at ground level, install battery cable(s) to battery terminals following the color coordinated terminal ends.

2   If installed, remove fuse from fuseholder.

3   Place the negative (-) wire (BLACK) ring terminal onto the negative (-) terminal of the battery.

4   Apply grease and thread supplied bolts, washers, and lock washers into battery terminal then torque to 50 in-lbs.

5   Place the positive (+) wire (RED) ring terminal onto the positive (+) terminal of the battery.

6   Apply grease and thread supplied bolts, washers, and lock washers into battery terminal then torque to 50 in-lbs.

7   Install terminal covers.

NOTE   **In highly corrosive environments, coat all fasteners and ring terminals with dielectric grease.**

MAIN BATTERY HARNESS
(2-BATTERY VERSION SHOWN)

!GREASE!

FUSEHOLDER

RED

!CAUTION!
RISK OF ELECTRICAL SHOCK
IF CONTACTS ARE SHORTED

BLACK

PROTECTIVE CAP
COVERING CONNECTOR
FOR SECOND BATTERY

18   Reinstall new or previously installed batteries into the bucket and strap them down. Be sure to place the main harness battery in the middle of the bucket. Connect all secondary battery harnessing to main battery harness.
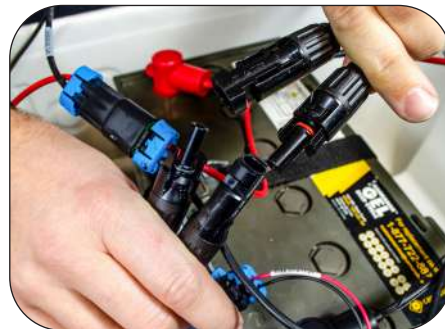

13   Connect fixture harness.

14   Connect PV extension to the EMS.

15   If your system has 2 panels, your system must be connected in parallel by using the provided branch connectors. Wiring two 24-volt panels in series will damage the EMS and void any warranty.

16   Connect battery harness to the EMS and reinstall fuse harness. You can now complete the install by commissioning the EMS with the EverGen Setup Bluetooth App on your iPhone or Android phone.

Commissioning

Every EverGen EMS must be commissioned using the EverGen Setup App. The app can be downloaded on most new iPhone and Android devices from the iOS App Store and the Google Play Store.

Use the signup tab to create an account. A verification email will be sent to the email address you used to create the account. Open the email and verify your account. Switch from the signup page to the login page and enter your email and password. Once inside the EverGen Setup App workspace, enter your order number (ORDXXXXXX).

You will need internet access to download the order information, but afterwards, the app can operate without a connection.

Once onsite, follow the steps in the app to connect with each light. Once connected, commission the light by confirming the system information along with the operating profile and power output.

The EverGen will then run an internal diagnostics test, then power the light for one minute.

Repeat this commission process for each EverGen EMS in the project.
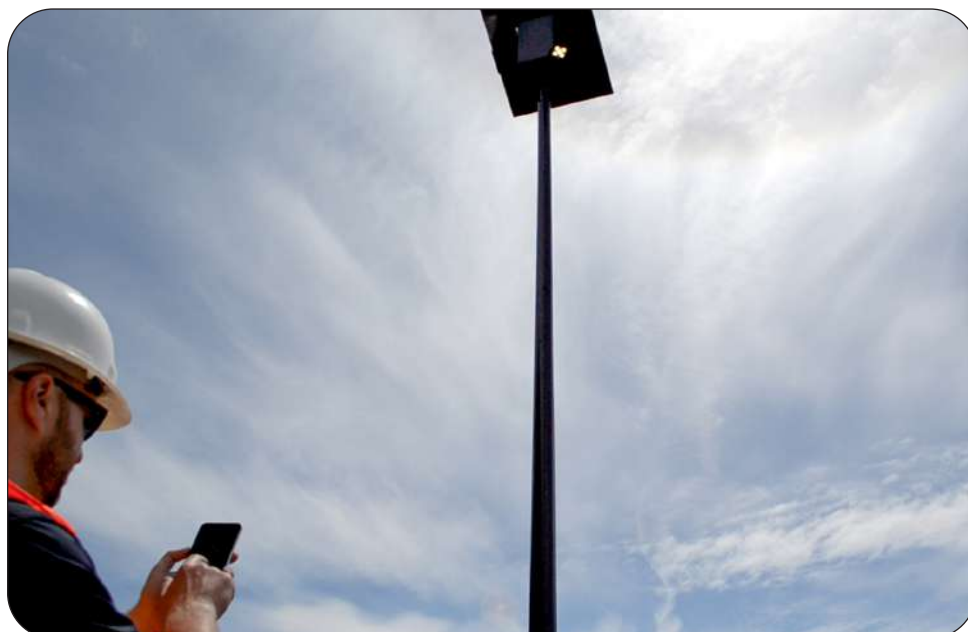
Warranty

This product is covered by the Sol warranty. Visit www.solarlighting.com for additional information or contact the customer service department.

Before contacting Sol's customer service department, please have the serial number of your system available, a brief description of the problem, as well as all details of the installation.

To contact Sol's customer service department:

Mail: Sol by Sunna Design
990 Biscayne Boulevard, Office 701,
Miami, FL 33132, USA

Phone: 1.772.286.9461
1.800.959.1329 (Toll Free in U.S. and Canada)

Email: customerservice@solarlighting.com

Website: solarlighting.com

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