

Explosion Proof LED Aluminum Drop Light Instruction Manual

INTRODUCTION

This document covers the operation, maintenance, and re-lamping procedures for an EPL-FL1524-LED series hazardous location work light.

This light is suitable for the following hazardous locations only:

Class I, Divisions 1 & 2, Group D
Class II, Divisions 1 & 2, Groups E, F, and G
Class III, Divisions 1 & 2

Refer to the National Electric Code (NEC) NFPA 70 for more information on hazardous locations.

The EPL-FL1524-LED work light runs on the voltage specified on product label. Check that the light being used matches this criteria for operation. Be sure that the line has appropriate termination and is grounded properly.

WARNING: Non-Explosion proof cord caps **MUST ONLY** be used **OUTSIDE HAZARDOUS AREA!**

Run cable and non-explosion proof cord cap outside hazardous area for powering the light. With standard non-explosion proof cord caps, only the Drop Light is rated for use in HAZARDOUS areas.

For pigtail models, refer to the following wire diagram.



MAINTENANCE:

WARNING: It is very important that only qualified personnel perform maintenance and repair operations in a NON-HAZARDOUS area. The integrity of the component assembly and flame-path must be maintained in order to provide adequate protection for personnel using this light. Comply with all NEC Rules and Regulations when performing maintenance operations. Failure to comply with these could result in an explosion, electrical shock, or personal injury.

CLEANING:

WARNING: DO NOT use any solvent or cleanser that contains alcohol, hydrocarbons, or has potential to cause an explosion. Using this type of cleanser could cause an explosion or serious personal injury.

CAUTION: Clean external parts of work light only; internal parts do not require cleaning. Applying solvent could result in damage to the electrical equipment.

The EPL-FL1524-LED can be cleaned by applying Simple Green® or an equivalent cleanser and wiping any dust or grease off with a rag. After cleaning process is performed, allow adequate time for light to completely dry before placing in operation.

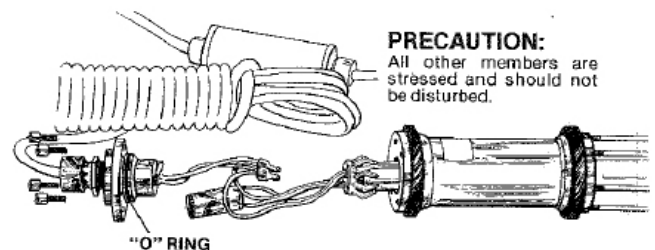
WARNING: When performing maintenance operations disconnect power. Failure to do so could result in electrical shock.

USAGE INSPECTION: Prior to each use make a thorough visual inspection of the work light for any chips, cracks, or burns within the glass, aluminum handle, and cage. Check the entire length of the cord for any frays or visible wires that could affect the performance of the light. Check that all the rubber bumpers are integral with the aluminum. If there are any frays in the cord, cracks in the glass or disturbances in the aluminum outside of normal wear, remove the light from service immediately and contact Larson Electronics.

TO REPLACE A LAMP OR STARTER:

WARNING: When re-lamping work light, disconnect power. Failure to do so could result in electrical shock.

1. Remove four bolts on handle with Allen Head Wrench
2. Pull cap gently and evenly outward
3. Wiring, starter, and tube should slide out
4. Replace necessary parts
5. Check "O" Ring - must be in good condition
6. Slide assembly back into handle and tube
7. Fasten securely with 4 bolts.
8. Test in non-hazardous location before using in hazardous location to ensure proper operation of light.



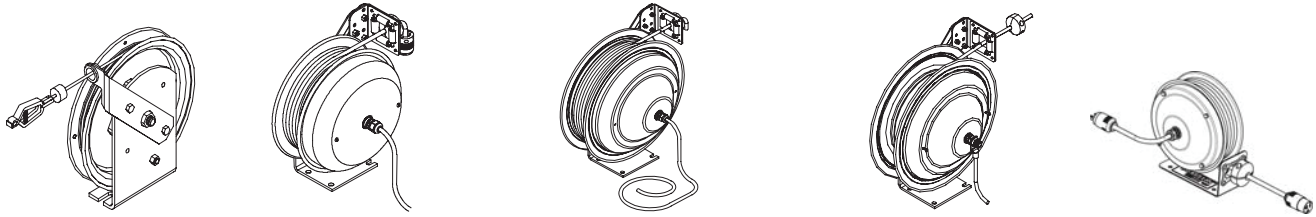
Should further information not covered by these instructions be required, please contact Larson Electronics at 1-800-369-6671 or sales@larsonelectronics.com for further assistance.

Please visit LarsonElectronics.com for **Warranty** and **Return** information.



INSTALLATION AND MAINTENANCE MANUAL

GENERAL AREA USE RETRACTABLE CORD AND CABLE CORD REELS



Larson Electronics

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NOTE: All designs, specifications, and dimensional data contained in this publication are subject to change without notice.



WARNING – APPLICATION

- ❖ THE PRODUCTS IN THIS INSTALLATION AND MAINTENANCE MANUAL HAVE BEEN TESTED UNDER CONTROLLED LABORATORY CONDITIONS TO MEET SPECIFIC TEST CRITERIA. THESE TESTS ARE NOT INTENDED TO REFLECT THE PERFORMANCE OF THE PRODUCTS OR ANY OTHER MATERIAL IN ANY SPECIFIC APPLICATION, BUT ARE INTENDED TO PROVIDE THE USER WITH APPLICATION GUIDELINES. THE PRODUCTS ARE INTENDED FOR USE BY KNOWLEDGEABLE PERSONS HAVING THE TECHNICAL SKILL NECESSARY TO EVALUATE THEIR SUITABILITY FOR SPECIFIC APPLICATIONS.



WARNING – USER RESPONSIBILITY

- ❖ THE USER, THROUGH ITS OWN ANALYSIS AND TESTING, IS SOLELY RESPONSIBLE FOR MAKING THE FINAL SELECTION OF THE SYSTEM AND COMPONENTS AND ASSURING THAT ALL PERFORMANCE, ENDURANCE, MAINTENANCE, SAFETY AND WARNING REQUIREMENTS OF THE APPLICATION ARE MET.
- ❖ TO THE EXTENT THAT Larson Electronics PROVIDE COMPONENT OR SYSTEM OPTIONS BASED UPON DATA OR SPECIFICATIONS PROVIDED BY THE USER, THE USER IS RESPONSIBLE FOR DETERMINING THAT SUCH DATA AND SPECIFICATIONS ARE SUITABLE AND SUFFICIENT FOR ALL APPLICATIONS AND REASONABLY FORESEEABLE USES OF THE COMPONENTS OR SYSTEM.



WARNING – SAFETY

- ❖ READ ALL SAFETY INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR MAINTAIN THIS PRODUCT. ONLY QUALIFIED PERSONNEL SHOULD UNDERTAKE THE INSTALLATION AND COMMISSIONING OF THIS PRODUCT. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.
- ❖ FAILURE TO FOLLOW RECOMMENDED APPLICATION INFORMATION AND RECOMMENDED PROCEDURES FOR SELECTION, INSTALLATION, CARE, MAINTENANCE AND STORAGE OF REEL ASSEMBLY, SWIVEL, HOSE, COUPLINGS OR HOSE ASSEMBLIES MAY RESULT IN FAILURE TO PERFORM PROPERLY AND MAY RESULT IN DAMAGE TO PROPERTY AND SERIOUS BODILY INJURY.
- ❖ FOLLOW GOOD MAINTENANCE PRACTICES – ESTABLISH A PROGRAM OF INSPECTION, TESTING AND REPLACEMENT OF REEL COMPONENTS, ACCESSORIES AND OR BRACKETS FROM FACTORS INCLUDING:
 - SEVERITY OF APPLICATION
 - FREQUENCY OF EQUIPMENT USE
 - PAST PERFORMANCE OF REEL COMPONENTS
- ❖ ONLY PROPERLY TRAINED PERSONS SHOULD INSPECT, TEST OR SERVICE REEL AND HOSE/CABLE ASSEMBLIES. PERIODIC UPDATING OF TRAINING IS RECOMMENDED.
- ❖ DOCUMENT MAINTENANCE, INSPECTIONS AND TESTING.

SAFETY



PRESSURE WARNINGS

- This equipment should be properly installed before use in accordance with local codes and ordinances.
- PSI is not applicable to operation of these particular series of reels.



OPERATIONAL WARNINGS

- Exercise care when handling the cable reel during normal operation. Cable reels have a rotating drum powered by a spring under tension.
- Do not use cable different from that for which the reel is intended. Changes in diameter, weight per foot, length of cable or flexibility (Minimum Bend Radius) will affect the operation of the reel.
- Mounting hardware and fasteners should be installed to maintain tightness under vibration and checked periodically to ensure tightness.
- Overhead installation mountings should be such that the reel is not supported by bolts in tension. A safety chain, cable, enclosure or netting is strongly recommended to minimize damage and/or possible injury in the event of a mounting failure.



MAINTENANCE WARNINGS

- Modification of the equipment may cause excessive wear and will void the warranty. Contact Larson Electronics regarding changes or modifications of equipment which could affect reliability or safety.
- **DO NOT DISASSEMBLE A SPRING MOTOR FOR ANY REASON!** Serious personal injury could result. Reels are equipped with a spring under tension. Contact Larson Electronics for assistance.



SPECIFICATIONS & LISTINGS

- The identified Series of Reel products within this manual are not certified or listed by any independent certifying or regulatory body. Refer to website, catalog, product labeling, or customer service for specific models which may be UL listed.

- This series of cable reels is intended for industrial use and are provided with permanent mounting means, with the exception of the portable reel models.



PRESSURE & TEMPERATURE RATING

- PSI rating is not applicable to operating factors of these reel series.
- Operational temperature ranges vary across the wide range of options. (Please refer to the Larson Electronics catalog, website or contact Customer Service for hose specific data). Cable reels should not be used at temperatures below or above the rating of the cable.



LABELS & MARKINGS

Cable Reels with and without cable

- The marking of the cable reel provide with or without cable includes the following
 - The label on the frame includes the Larson Electronics name and Logo, the product catalog number, the individual product serial number, rating and what type and length of cable intended for use on the reel.
 - The maximum electrical rating for every reel supplied without cable is marked on the Larson Electronics Identification Label. In absence of this information, refer to website, catalog, or customer service. Actual rating is determined by the installed cable and is not to exceed the indicated maximum operational rating.



PERSONAL SAFETY

- Ensure reel has been properly installed before connecting supply line.
- Before connecting to reel, be certain supply line does not exceed rated parameters of the cable reel or voltage / amperage rating.
- Perform "Operational Check" per instructions to ensure reel is operating properly.



WARNING: Prevent static sparking. When working around flammables, that the cable reel, cable, and equipment are properly grounded.

INSTALLATION



WARNING: READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR MAINTAIN THIS PRODUCT. ONLY QUALIFIED PERSONNEL SHOULD UNDERTAKE THE INSTALLATION AND COMMISSIONING OF THIS PRODUCT. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.



WARNING: REEL SHOULD NOT BE INSTALLED ABOVE 15 FEET MAXIMUM FROM THE FLOOR.

PERSONAL SAFETY

- Ensure reel has been properly installed before connecting supply line. Note: Reel should NOT be installed above 15 feet maximum from the floor.
- Before connecting reel to power supply insure source is compatible with specifications of the reel.
- If reel was purchased without cable, thoroughly review the "Cable Installation" instructions to properly install cable.
- Perform "Operational Check" per instructions to ensure reel is operating properly. NEVER use a spring retractable reel that is not performing as intended.
- Inspect for frayed, worn, or lacerated cables prior to using reel.
- Always pull on cord/cable itself. Never pull on the attachment.

MOUNTING OF REEL

- Reel is supplied with guide arm in standard positions depending on model.
- Guide arm may be adjusted to desired location as shown in figure 1.0. Refer to figure 2.0 for Series models.
- Pull out cable until reel latches.
- Remove bolts holding guide arm to support base.
- Reposition guide arm and securely fasten bolts.
- To mount reel to a solid structure you will need 7/16" or M12 bolts, washers, and nuts. Select models require 3/8" hardware. Masonry bolts may be used depending on mounting application. Mounting hardware is NOT provided. Mounting patterns will vary depending on model.

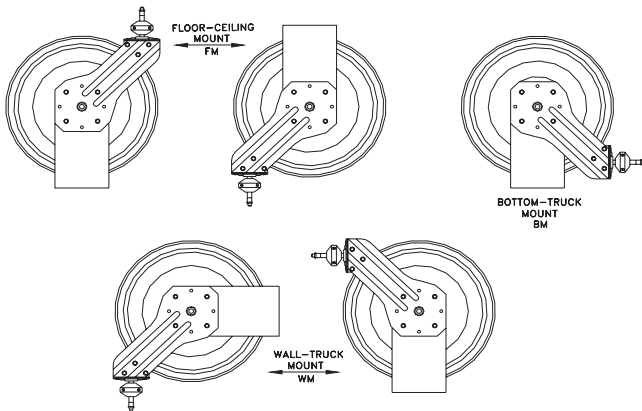


Fig. 1.0

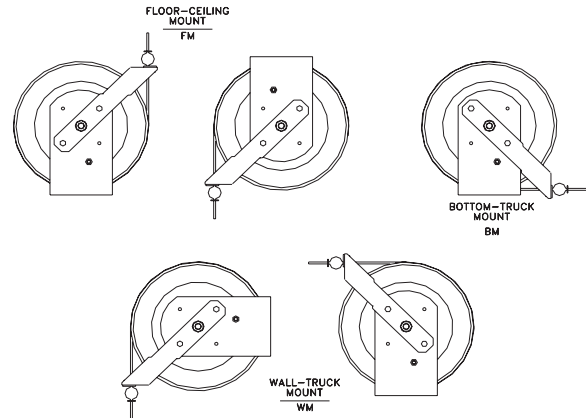


Fig. 2.0



NOTE: On select models **ground path** is from end of cable clamp to unpainted surface on bottom of reel base.

- Loosely fit two pieces of mounting hardware to ceiling/floor/or wall so that reel can be slid into position. Fit reel. Install two pieces of hardware in other end of reel. Securely fasten all bolts and nuts.

OPERATIONAL CHECK

- Check reel for correct operation by slowly pulling out cable. A clicking noise will be heard after each half revolution of the drum.
- LATCH** the reel. Pull out the cable and allow it to slightly retract after the first, second or third "click" is heard.
- UNLATCH** the reel. Slowly pull the cable until the clicking noise stops, and then allow the cable to retract. The hose stopper should rest against the roller hose guide.



CAUTION: DO NOT ALLOW CABLE TO RETRACT WITHOUT RESTRAINING RECOIL SPEED. NEVER LET GO OF THE CABLE WHEN REWINDING. NOTE: COIL MODELS ARE DESIGNED TO RETRACT AT A SLOW CONTROLLED SPEED.

- Apply power to reel. Periodically check cable for improper wear.
- Reels are shipped with approximately three pre-wraps of tension. This is adequate for most applications. However, if your application requires more or less tension, see "Spring Tension Adjustment" instructions.
- Lubrication is NOT required.

SPRING TENSION ADJUSTMENT

- Remove power from reel prior to making spring adjustments.
- Pull out approximately 6 feet (2m) of cable and latch the drum.
- Add or subtract one wrap of cable as desired to acquire the proper tension on the reel.



NOTE: Spring tension adjustment is accomplished by adding wraps of cable around the drum (to increase tension) or subtracting wraps of cable (to decrease tension).



CAUTION: Improper tensioning of spring or adding too many pre-wraps may cause damage to spring mechanism. Only authorized personnel should make adjustments.

- Unlatch drum and check for proper tension.
- Connect power source.

SPRING CARTRIDGE REPLACEMENT

- Pull out approximately 3 feet (1m) of cable and latch the reel.
- Release all spring tension by removing five wraps of cable from reel.
- Carefully unlatch the reel and **firmly hold the drum**. Allow the drum to **slowly** unwind until it stops.
- Remove two nuts from spring cartridge. (See figure 3.0)
- Pull spring cartridge off center axle shaft.
- Reverse above procedure to re-assemble.
- Re-tension the reel by turning the drum three complete turns and latching in place. Follow "Spring Tension Adjustment" procedure.

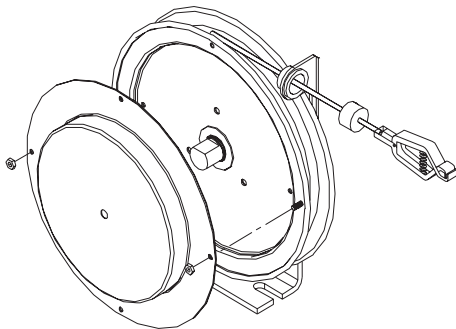


Fig 3.0

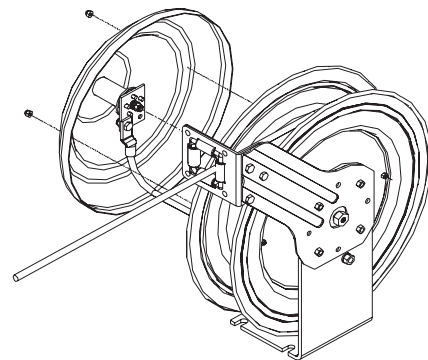


Fig 4.0

SPRING CANISTER REPLACEMENT

- Pull out approximately 3 feet (1m) of cable and latch the reel.
- Release all spring tension by removing five wraps of cable from reel.
- Carefully unlatch the reel and **firmly hold the drum**. Allow the drum to **slowly** unwind until it stops.
- Remove input cable from reel. Remove cover. (See figure 4.0)
- Remove two spring canister mounting nuts from opposite side of drum assembly.
- Pull spring canister off drum shaft.
- Reverse above procedure to re-assemble.
- Re-tension the reel by turning the drum three complete turns and latching in place. Follow "Spring Tension Adjustment" procedure.

SPRING CANISTER REPLACEMENT



NOTE: Spring canister not replaceable on select models.

- Pull out approximately 3 feet (1m) of cable and latch the reel.
- Release all spring tension by removing five wraps of cable from reel.
- Carefully unlatch the reel and **firmly hold the drum**. Allow the drum to **slowly** unwind until it stops.
- Remove the input strain relief cap. Remove two acorn nuts to take off cover.
- Refer to figures 5.0 or 6.0, depending on model, to become familiar with components before performing the following steps.
- Disconnect wires at wire nuts. Remove inlet port from the main axle. (This step applies to select models only).
- Remove two coupling nuts located on the electrical mounting plate. Allow the electrical assembly to swing out of the way.
- Remove two spring canister mounting nuts from opposite side of drum assembly.
- Pull spring canister off drum shaft.
- Reverse above procedure to re-assemble.
- Re-tension the reel by turning the drum three complete turns and latching in place. Follow "Spring Tension Adjustment" procedure.



CAUTION: Disconnect from power source prior to making any repairs or adjustments to the reel.

SLIP RING BRUSH REPLACEMENT

- Disconnect power source.
- Remove input cable from reel. Remove cover. See figure 4.0
- Remove brush retaining nut to access worn brushes.
- Replace with new copper brushes.
- Reverse above procedure to re-assemble reel.

SLIP RING BRUSH REPLACEMENT

- Disconnect power source.
- Remove input strain relief cap. Remove cover. See Figures 5.0 or 6.0 depending on model.
- Disconnect brush from wire and remove spring finger (select models only)
- Remove brush retaining bolt and remove brush (select models only).
- Reverse above procedure to re-assemble.

INSTALLATION OF CABLE

- Securely stabilize the reel.
- Wind the Reel Drum clockwise (facing the Spring Cartridge 1) until the spring is tight.
- **Use Extreme Caution!** Back off approximately two turns and lock the Reel Drum from rotating.
- Insert the fitted end of the cable through the cable Guide Arm and through the cut-out in the Drum.
- The cable fitting should now be on the inside of the Drum, connect cable to the existing bolt.
- **CAREFULLY** release the Locking Ratchet and **SLOWLY** allow the cable to retract onto the Reel.



NOTE: Final Spring Tension Adjustment is accomplished by adding wraps of Cable around the Drum (to increase tension) or subtracting wraps of Cable (to decrease tension).

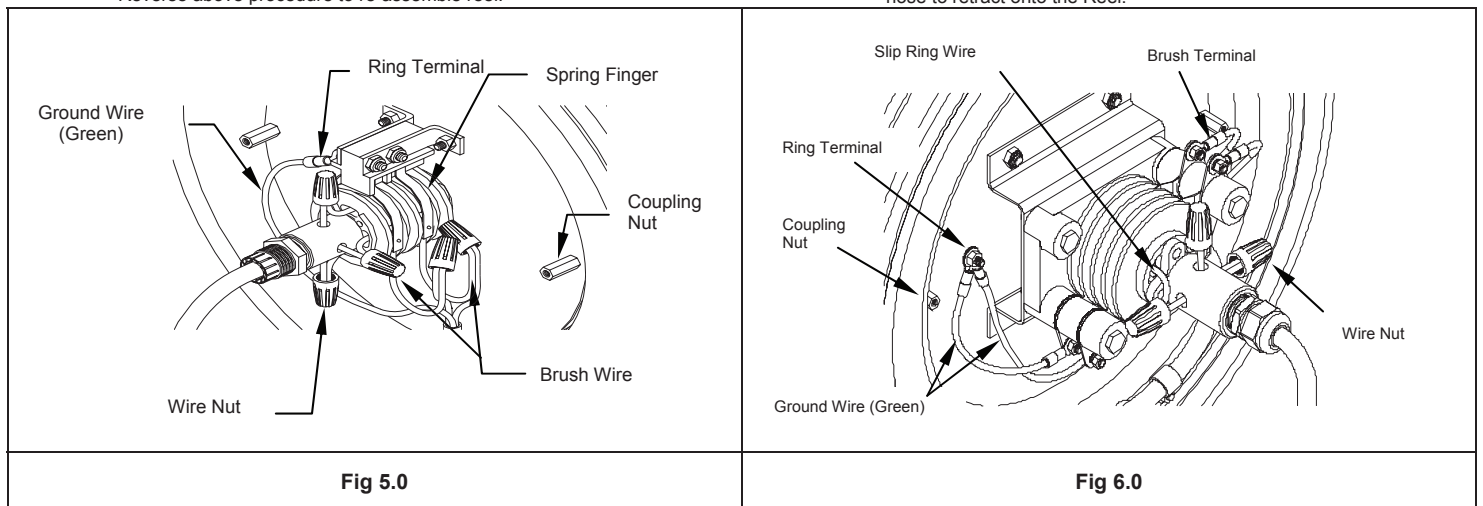
REPLACEMENT OF CABLE

- Securely stabilize the Reel
- Pull out all the Cable and lock the Reel in that position.



CAUTION: Make sure Reel is securely locked and will not rotate back.

- Carefully disconnect Cable from inside of Reel and remove old Cable.
- Remove Cable Stopper from old cable and fit these parts to the new Cable in the same position.
- Feed new Cable fitted end through the Guide Arms and through the cut-out slot on the Drum.
- The fitting should now be on the inside of the Drum to allow you to reconnect the cable to the reel.
- **CAREFULLY** release the Locking Ratchet and **SLOWLY** allow the hose to retract onto the Reel.



INSTALLATION AND MAINTENANCE MANUAL

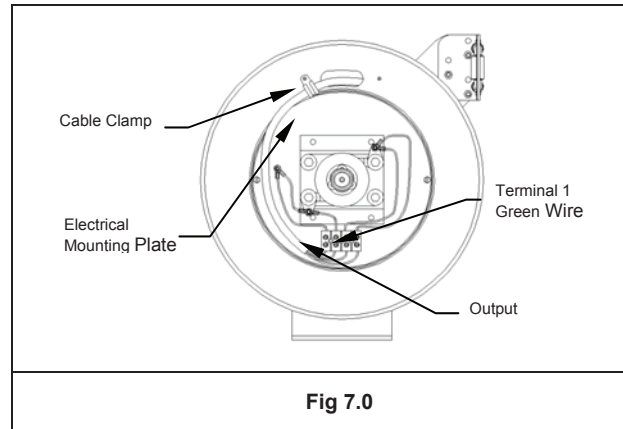


Fig 7.0

INSTALLATION OF OUTPUT CABLE

- Remove Input Strain Relief Cap. Remove Cover.
- **Wind the Reel Drum clockwise (facing the cover) until the Spring is tight.**
- **Use Extreme Caution!** Back off approximately two turns and lock the Reel Drum from rotating with the terminal block in the down position.
- Insert the bare wire end of the cable through the four roller guide arm and through the cut-out in the side of the drum flange.
- The bare wire end should now be on the outside of the Drum. Secure the Cable using the Cable Clamps allowing approximately 10" of Cable through second Clamp.
- Insert the bare wire ends of the output cable into the bottom side of the terminal strip.
- Connect wires to ground and Brush Terminals, by color, to their respective Brush.
- Connect the green ground wire to terminal 1 on the left (Wire path must begin and end with the same color).
- Connect the black wire to terminal 2, the white to terminal 3 and the red (if used) to terminal 4.

INSTALLATION OF LEAD-IN CABLE



NOTE: Slip ring is pre-wired to terminal block at factory.

- Remove Input Strain Relief Cap. Remove Cover.
- Strip insulation from new Cable approximately 2" from Cable end, exposing the individual wires.
- Thread Cable through Strain Relief Cap, Strain Relief, Cover and Inlet Port, respectively. Thread each wire through the holes provided in the Inlet Port.
- Connect lead-in wires to slip rings wires using Wire Nuts. (Wire path must begin and end with the same color.)
- Connect the green wire to lead 1, the black to lead 2, the white to lead 3 and the red (if used) to lead 4.
- Use a meter to verify that the wires of each circuit are the same color on the input and output cables.
- Install Cover and secure in place. Replace strain relief.
- **CAREFULLY** release the Locking Ratchet and **SLOWLY** allow the Cable to retract onto the Reel.

INSTALLATION AND MAINTENANCE MANUAL

TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
CABLE WILL NOT FULLY RETRACT	a) Outlet attachment is too heavy. b) Spring is fatigued. c) Field installed cable is too long.	a) Add spring tension. See "Spring Tension Adjustment". b) Add spring tension. See "Spring Tension Adjustment". Replace Spring Canister if required. c) Call local Distributor for correct specified cable length.
CABLE WILL NOT RETRACT AT ALL	Spring has lost all tension or has possibly broken.	a) Reinstall Spring Tension b) Replace Spring Canister. See "Spring Canister Replacement".
REEL WILL NOT LATCH	a) Incorrect operation. b) Dog spring or locking cam is broken or worn.	a) Reel latches on first, second, third or fourth "click". After forth "click" it automatically rewinds. b) Replace dog spring or locking cam.
NO ELECTRICAL POWER AT OUTPUT END OF CABLE.	a) Wires are severed. b) Wires have become disconnected. c) Slip ring / brushes are worn	a) Replace entire cable. See instructions. b) Check all connections ensuring they are properly wired. c) Replace slip ring / brushes. See instructions.
BREAKER OR FUSE REPEATEDLY BLOWN.	a) Application does not conform to the electrical rating of the reel. b) Wires are broken or shorted. c) Field installed cable was not wired properly.	a) Check electrical rating on reel label. Do not attempt to use a reel that is not rated properly for the application. b) Check wiring path on reel to determine if wires are broken or shorted. Correct problem. See instructions for wiring. c) Review wiring. See instructions to correct problem.
CABLE REEL IS NOT PROVIDING ADEQUATE GROUND	a) Cable or reel has become damaged or worn. b) Cable or reel was not installed properly.	a) Review ground path and correct problem. Use meter to inspect. b) Review installation procedure and correct problem. Note: Do not use reels until a proper ground is provided.
REEL RETRACTS TOO FAST	a) Reel is improperly tensioned. b) Coil unit is defective.	a) Decrease spring tension. See "Spring Tension Adjustment". b) Replace Coil unit. Note: When weather is extremely hot, reel will operate slightly faster than under normal conditions. This function is normal.
CABLE LOCKS UP WHEN FULLY EXTENDED	Cable clamp is in the incorrect position.	Relocate cable clamp to optional location.



WARNING: Use extreme caution when operating or servicing electrical cable reels. Personal injury or death can occur even under low voltage! Only qualified service technicians should troubleshoot and repair these products.



Observe all applicable NEC, OSHA, and local codes when operating or installing these products.



NOTE: Consider work area location when adjusting arm and permanently installing reel. Reel should be placed so that cord exits rollers at approximately zero degrees perpendicular. Avoid contact of cord at corners of roller guide. Pull cord straight out rollers when preparing for use and feed cord back through center of rollers to coil up on reel. Use free hand to help guide cord at entrance of roller guide.



CAUTION: Failure to adhere to above note may cause undue abrasion of cord and/or sticking of cord at corners.