



**FEDERAL SIGNAL**

Safety and Security Systems / **Industrial**

# **Models 141ST-120 and 141ST-240 Electraflash® Strobe Warning Lights**

**for Indoor/Outdoor Use**



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## ***Installation and Maintenance Instructions***

256810G  
Rev. G1 1014  
Printed in U.S.A.

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español.....página 29*



**Warranty** – Seller warrants all goods for five years on parts and 2-1/2 years on labor, under the following conditions and exceptions: Seller warrants that all goods of Seller's manufacture will conform to any descriptions thereof for specifications which are expressly made a part of this sales contract and at the time of sale by Seller such goods shall be commercially free from defects in material or workmanship. Seller reserves the right at the Seller's discretion to "Repair and Return" or "Replace" any item deemed defective during the warranty period. This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor charges for removal and reinstallation of the product. This warranty shall be ineffective and shall not apply to goods that have been subjected to misuse, neglect, accident, damage, improper maintenance, or to goods altered or repaired by anyone other than Seller or its authorized representative, or if five years have elapsed from the date of shipment of the goods by Seller with the following exceptions: lamps and strobe tubes are not covered under this warranty. Outdoor warning sirens and controllers manufactured by Federal Warning Systems are warranted for two years on parts and one year on labor. No agent, employee, representative or distributor of Seller has any authority to bind the Seller to any representation, affirmation, or warranty concerning the goods and any such representation, affirmation or warranty shall not be deemed to have become a part of the basics of the sales contract and shall be unenforceable. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. These warranties shall not apply unless Seller shall be given reasonable opportunity to investigate all claims for allegedly defective goods. Upon Seller's instruction a sample only of allegedly defective goods shall be returned to Seller for its inspection and approval. The basis of all claims for alleged defects in the goods not discoverable upon reasonable inspection thereof pursuant to paragraph 8 hereof must be fully explained in writing and received by Seller within thirty days after Buyer learns of the defect or such claim shall be deemed waived.



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## **Safety Messages to Installers and Users**

### **⚠ WARNING**

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electrical Code and/or Canadian Electrical Code and will follow the NEC and/or CEC Guidelines as well as all local codes.

This device should be considered a part of the warning system and not the entire warning system.

The selection of the mounting location for the device, its controls and the routing of the wiring are to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Do not connect this light to the system when power is on.
- Never alter the light in any manner. Safety may be affected if additional openings or alterations are made to the internal components or housing.
- After installation, test the light system to ensure that it is operating properly.
- After testing is complete, provide a copy of these instructions to all personnel.
- Establish a procedure to routinely check the light system for proper activation and operation.
- Not to be used as a visual public mode alarm notification appliance.

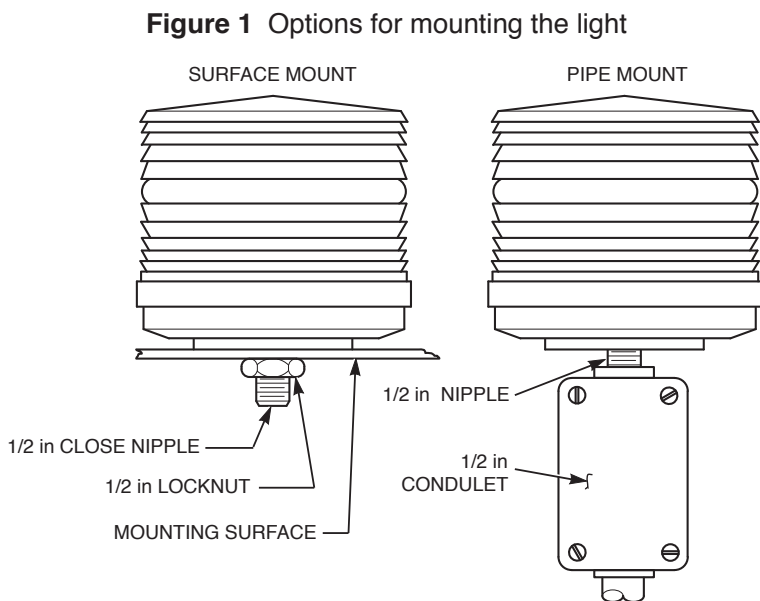
Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

## Unpacking the Light

After unpacking the light, examine it for damage that may have occurred in transit. If the light has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or discarding them. Disposal of all shipping materials must be carried out in accordance with national and local codes and standards. If any parts are missing, please call Federal Signal Customer Support at +1 708-534-4756 or +1 877-289-3246.

## Mounting the Light

The 141ST model may be mounted on a flat surface or a half-inch pipe as shown in Figure 1. Optional wall brackets are available for mounting the light on walls or at the corners (see “Ordering Replacement parts and accessories” on page 12).



Underwriters Laboratories has investigated the Model 225 to ensure that it complies with the TYPE 4X (watertight and corrosion resistant) and IP66 (dust-tight and protection against heavy seas) enclosure

requirements. If the light is used outdoors, it **MUST** be mounted with the DOME UP. Mounting hardware and installation details are left to the installer.

## Wiring the Light

### **⚠ WARNING**

***SHOCK HAZARD: To avoid electrical shock hazards, do not connect or disconnect wires while power is applied.***

### **NOTICE**

***ELECTROSTATIC DISCHARGE: The circuitry of this warning light can be damaged by electrostatic discharge (ESD). Always follow anti-static procedures while installing this warning light.***

Use only 14 AWG to 18 AWG wire for the power connections. Strip no more than 0.25 inch of wire insulation from the ends of the power leads.

To connect power:

1. Remove the two outer dome screws in the base, and remove the dome.

### **NOTICE**

***DO NOT TOUCH THE TUBE WITH BARE HANDS: Oil deposits on the glass portion of the strobe tube can cause the glass to fracture during use. If you are unsure if the glass has been handled without gloves, clean the glass using a soft cloth and isopropyl alcohol before installing the tube.***

2. The strobe tube is located at inside the bottom of the base to protect it during shipment. Remove the tape and insert the tube into the connectors on the board surface. Make sure all three pins enter the board connectors and apply pressure slowly to the outer leads to properly seat the strobe tube.
3. Connect the AC power leads to the 120 Vac or 240 Vac terminals of the two-position connector by inserting the stripped wire ends into the connector as far as they can travel.

## ***Installation and Maintenance Instructions***

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4. Make sure the insulation of the supply lead is flush with the connector. If stranded wire is used, be sure that there are no loose strands outside the connector plug that could touch the adjacent lead and cause a short circuit.
5. Tighten the terminal screws to secure the wires in the connector.
6. Place the outer dome back into position and reinstall the two outer dome screws
7. Apply power to verify the light operates properly.

## **Safety Message to Maintenance Personnel**

### **⚠ WARNING**

Listed below are some important safety instructions and precautions you should follow:

- Read and understand all instructions before operating this system.
- Any maintenance to the light system must be done with power turned off.
- Any maintenance to the light system must be performed by a trained electrician who is thoroughly familiar with all applicable national and local codes in the country of use.
- If the dome is damaged in any way, it should be replaced.
- Do not connect this light to the system when power is on.
- Never alter the unit in any manner. Safety may be compromised if additional openings or other alterations are made to the internal components or housing.
- The nameplate should NOT be obscured, as it contains cautionary and/or other information of importance to maintenance personnel. Ensure the nameplate remains readable if the housing exterior is painted.
- After performing any maintenance, test the light system to ensure that it is operating properly.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

## Replacing the Strobe Tube

### **⚠ WARNING**

***SHOCK HAZARD: Strobe systems generate high voltages. Disconnect power from the strobe system and wait at least 5 minutes before opening the unit. Do not apply power to the unit while it is open. Failure to follow this warning could result in serious injury or death.***

### **⚠ CAUTION**

***HANDLE STROBE TUBES CAREFULLY: Strobe tubes get hot enough to burn you. Always allow these tubes to cool before handling them. Strobe tubes are also pressurized and, if broken, can result in flying glass. Failure to follow this warning may result in personal injury.***

### **NOTICE**

***ELECTROSTATIC DISCHARGE: The circuitry of this warning light can be damaged by electrostatic discharge (ESD). Always follow ant-static procedures while replacing the circuit board.***

To replace the strobe tube:

1. Disconnect power from the electrical circuit.
2. Wait at least five minutes before removing the dome.
3. See Figure 2 on page 10. Remove the two outer dome screws in the base assembly, and remove the dome.
4. Carefully remove the burnt-out strobe tube by lifting it from both sides at once.

### **NOTICE**

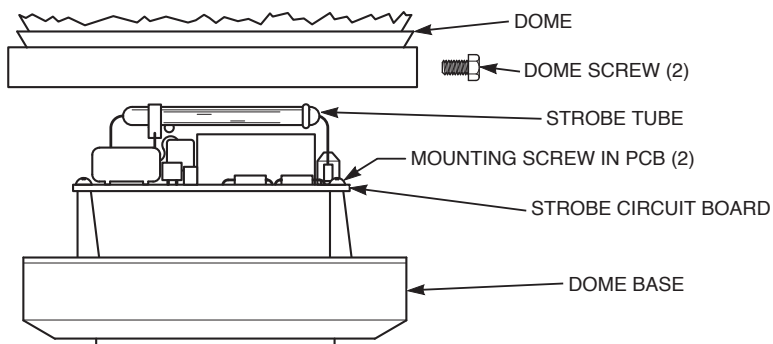
***DO NOT TOUCH THE STROBE TUBE WITH BARE HANDS: Oil deposits on the glass portion of the strobe tube can cause the glass to fracture during use. If you are unsure if the glass has been handled without gloves, clean the glass using a soft cloth and isopropyl alcohol before installing the tube.***

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5. Insert the new tube into the connectors on the board surface. Make sure all three pins enter the board connectors and apply pressure slowly to the outer leads to properly seat the strobe tube.
6. Place the outer dome back into position and reinstall the two screws in the outer dome.
7. Apply power and verify that the light operates properly.

**Figure 2** Dome removed from base



## Replacing the Circuit Board

### **⚠ WARNING**

**SHOCK HAZARD:** *Strobe systems generate high voltages. Disconnect power from the strobe system and wait at least 5 minutes before opening the light. Do not apply power to the light while it is open. Failure to follow this warning could result in serious injury or death.*

### **NOTICE**

**ELECTROSTATIC DISCHARGE:** *The circuitry of this warning light can be damaged by electrostatic discharge (ESD). Always follow ant-static procedures while replacing the circuit board.*

1. **Remove the circuit board:**
  - a. Disconnect power from the electrical circuit.
  - b. Wait at least five minutes before removing the dome.

- c. See Figure 2. Remove the two outer dome screws in the base assembly and remove the dome.
- d. Disconnect power from the board connector.
- e. Remove the two mounting screws positioned at the outer corners of the circuit board.
- f. Remove the circuit board.

### 2. Install the new circuit board:

#### **NOTICE**

***CIRCUIT BOARD DAMAGE: Do not overtighten the mounting screws. Damage to the printed circuit board will result.***

- a. Place the new circuit board on top of the posts, and reinstall the mounting screws.
- b. Connect the AC power leads to the 120 Vac or 240 Vac terminals of the two-position connector by inserting the stripped wire ends into the connector as far as they can travel.
- c. Make sure the insulation of the supply lead is flush with the connector. If stranded wire is used, be sure that there are no loose strands outside the connector plug that could touch the adjacent lead and cause a short circuit.
- d. Tighten the terminal screws to secure the wires in the connector.
- e. Place the outer dome back into position, and reinstall the two outer dome screws.
- f. Apply power and verify that the light operates properly.

### Cleaning the Enclosure

The enclosure should be cleaned periodically to maintain maximum light output. Use only mild, non-abrasive cleaning agents. The dome should be regularly inspected for scratches and chips, and if damaged, it should be replaced.

## **Ordering Replacement Parts and Accessories**

To order accessories and replacement parts, call Federal Signal Customer Support at 708-534-4756 or 877-289-3246.

**Table 1** Replacement Parts

<b>Description</b>	<b>Part Number</b>
Dome, Amber	K8263079
Dome, Blue	K8263079-01
Dome, Red	K8263079-02
Dome, Green	K8263079-03
Strobe Tube	K149128
PCBA, 120 V	K2001195
PCBA, 240 V	K2001195-01

**Table 2** Optional accessories

<b>Description</b>	<b>Part Number</b>
Corner Bracket	LCMB2
Wall Bracket	LWMB2

## **Getting Repair Service or Technical Assistance**

Products returned for repair require a Return Authorization form from your local distributor or from Federal Signal. For repair service or technical assistance from Federal Signal, call 708-534-4756 or 877-289-3246.

For instruction manuals and information on related products, visit: [www.federsignal-indust.com](http://www.federsignal-indust.com).

## **Returning the Product for Credit**

Product returns for credit require a return authorization from your local distributor prior to returning the product to Federal Signal. Please contact your distributor for assistance.

A product is qualified to be returned for credit when the following conditions are met:

- Product is resalable and in the original cartons

- Product has not been previously installed
- Product is the current revision
- Product has not been previously repaired
- Product is a standard product
- Product is not a service part

All returns are subject to a re-stock fee.

Defective products that are returned within the warranty period will be repaired or replaced at Federal Signal's sole discretion. Defective products do not include those products with lamp failure.

Circumstances other than those listed above will be addressed on a case-by-case basis.



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