

25500452 Rev A3 0222

## Safety Message to Installers and Service Personnel of Warning Light Equipment

### **▲ WARNING**

People's lives depend on your proper installation and servicing of Federal Signal products. It is important to read and follow all instructions shipped with this product and the original product. Listed below are some other important safety instructions and precautions you should follow:

- To properly install this light, you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- Always refer to the vehicle's service manuals when performing equipment installations on a vehicle.
- Never attempt to install aftermarket equipment that connects to the vehicle wiring without reviewing a vehicle wiring diagram available from the vehicle manufacturer. Ensure that your installation will not affect vehicle operation or mandated safety functions or circuits. Always check the vehicle for proper operation after installation.
- When drilling into a vehicle structure, ensure that both sides of the surface are clear of anything that could be damaged.
- In order for the light to function properly, a separate ground connection must be made. If practical, it should be connected to the fusible link at the front fender between the negative (-) battery terminal and chassis ground. At a minimum, it may be attached to a solid metal body or chassis part that will provide an effective ground path as long as the light system is to be used.
- Locate the light control so the VEHICLE and CONTROL can be operated safely under all driving conditions.
- If a seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- Do not attempt to activate or deactivate the light control while driving in a hazardous situation.
- This product contains high-intensity LED devices. To prevent permanent eye damage, DO NOT stare into the light beam at close range.
- Frequently inspect the light system to ensure that it is operating properly and that it is securely attached to the vehicle.
- Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury to you or others.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

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

### Overview

The Federal Signal MicroPulse SignalMaster is a directional light assembly for use in a flashing mode. The only lens is clear with red or amber LEDs.

The MicroPulse SignalMaster provides these distinctive directional signals: left arrow, right arrow, and center out. In addition, an alternating flash pattern produces a warning signal for use when a directional signal may not be appropriate.

When a directional signal is selected, the lamps illuminate individually in a sequential sweeping motion until all lamps are illuminated. The brake module, which operates independently from the control module, is located at the center of the light bar.

#### **⚠ WARNING**

***These lights are for secondary warning only. They are not for use as a primary warning system. Failure to use these lights as intended may cause property damage, personal injury, or death.***

Table 1 Specifications

Input Voltage	11 Vdc to 13.6 Vdc (12 V models)
Polarity	Negative ground only
Height	2.6 inches (6.6 cm)
Length	84.2 inches (213.9 cm), 65.2 inches (165.6 cm), 50.6 inches (128.5 cm), 44.2 inches (112.3 cm), 41.8 inches (106.2 cm), 36.9 inches (93.7 cm), 31.7 inches (80.5 cm), and 23.1 inches (58.7 cm)
Depth	3.4 inches (8.6 cm)
Cable Length	15 x 30 x 60 feet (457.2 x 914.4 x 1828.8 cm)

### Installing the MicroPulse SignalMaster Light Assembly

#### **⚠ WARNING**

***STATIC SENSITIVE DEVICE: The circuitry can be damaged or destroyed by electrostatic discharge (ESD). To prevent ESD, observe anti-static procedures during installation.***

Install the light assembly as described in the instructions included with the mounting kit. Route the cables to the planned location of the control unit.

### Installing the Control Unit and Completing the Wiring

To install the unit:

#### **⚠ WARNING**

***UNIT REQUIRES VENTILATION: The control unit needs to radiate heat. Do not install it in an area where it cannot dissipate heat into the air. Do not mount the unit near a heater duct or under the hood.***

**NOTE:** Plan all wiring and cable routing before selecting a mounting location for the control unit.

1. Install the control unit and complete the wiring as described in the instructions included with the control unit.

**NOTICE**

**REVERSE POLARITY/MISWIRING:** Reverse polarity or incorrect voltage may damage the light. To avoid damage to the light, ensure that the battery voltage is the same as the voltage rating of the light and that the correct polarity is observed.

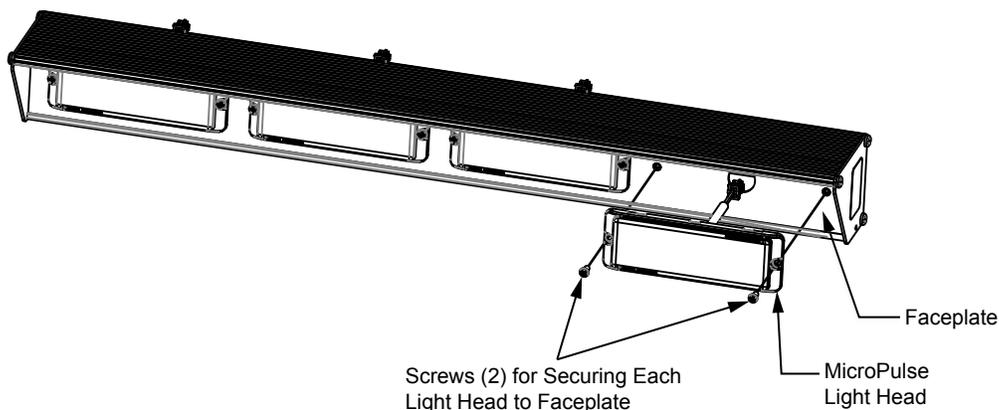
- Using 18 AWG (minimum) wire, connect the red (+) lead to the positive power source terminal for the brake module.
- Using 18 AWG (minimum) wire, connect the black (-) lead to the negative power source terminal for the brake module.

**Removing a Light Head**

To remove the light head:

- Remove and retain the two screws that secure the light to the faceplate (Figure 1).
- Disconnect the wire harness connector from the cable assembly.

Figure 1 MicroPulse SignalMaster light head removal



**Reinstalling a Light Head**

To reinstall the light head:

- Reconnect the wire harness to the cable assembly.
- Install the replacement light head by securing it with two removed screws. Tighten the screws so that there is no movement in that light head. Ensure that the LED is facing the upright position.

**Removing a DOT Lamp**

To remove the 194 bulb:

- Unsnap the lens.
- Pull out the 194 bulb.

**Reinstalling a DOT Lamp**

To reinstall the bulb:

- Carefully push in the 194 bulb.
- Snap in the lens and make sure it is in position.

## Testing the System

### **⚠ WARNING**

**LIGHT HAZARD:** *To be an effective warning device, this product produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range, or permanent damage to your eyesight may occur.*

### **⚠ WARNING**

**SOUND HAZARD:** *All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to siren sound and wear hearing protection. Do not sound the siren indoors or in enclosed areas where you and others will be exposed to the sound.*

After the installation, test the emergency warning system to ensure that it is operating properly. Also test all vehicle functions, including horn operation, vehicle safety functions, and vehicle lighting systems to ensure proper operation. Ensure that the installation has not affected the vehicle operation or changed any vehicle safety functions or circuits. After testing is complete, provide a copy of these instructions to the instructional staff and all operating personnel.

## Cleaning the Plastic Lenses

### **NOTICE**

**CRAZING/CLEANING SOLUTIONS:** *The use of cleaning solutions, such as strong detergents, solvents, and petroleum products, can cause crazing (cracking) of the light bar lens and reflectors. To clean the reflectors, use a soft, damp cloth. To clean the lens, use a soft cloth and a solution of water and a mild detergent.*

### **⚠ WARNING**

**CRAZING/CHEMICALS:** *Crazed, cracked or faded lenses or reflectors reduce the light output and the effectiveness of the lighting system. A lens or reflectors showing this type of aging must be replaced. Failure to follow this warning may result in bodily injury or death.*

Failure to follow this warning can damage the lenses and reflectors, reducing their effectiveness, and may result in bodily injury or death to you or others.

1. Rinse the lenses with lukewarm water to loosen dirt and debris.
2. Use a mild soap, lukewarm water, and a soft cloth to gently clean the lenses. To avoid damaging the lens, do not use heavy pressure or caustic, abrasive, or petroleum-based cleaners.
3. Rinse and dry the lenses with a soft cloth to prevent water spots.
4. To remove fine scratches and haze, use a specialty plastic cleaner/polish and a soft cloth. You can also use a high-quality automotive paste cleaner/wax that is non-abrasive.

## **Getting Technical Support and Service**

For technical support and service, please contact:

Service Department  
Federal Signal Corporation  
Phone: 1-800-433-9132  
Email: [empserviceinfo@fedsig.com](mailto:empserviceinfo@fedsig.com)  
[www.fedsig.com](http://www.fedsig.com)

## **Getting Repair Service**

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain an RMA from a local Distributor or Manufacturer's Representative.

Provide a brief explanation of the service requested or the nature of the malfunction.

Address all communications and shipments to the following:

Federal Signal Corporation  
Service Department  
2645 Federal Signal Drive  
University Park, IL 60484-3167

**Limited Warranty**

This product is subject to and covered by a limited warranty, a copy of which can be found at [www.fedsig.com/SSG-Warranty](http://www.fedsig.com/SSG-Warranty). A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to [info@fedsig.com](mailto:info@fedsig.com) or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.

### **Ordering Replacement Parts**

To order replacement parts, call Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT) or contact your nearest distributor.

**Table 2 Replacement Parts**

<b>Description</b>	<b>Part Number</b>
Surface Mount, Brake, 12-LED, Red	MPS121UD-BRAKE
Surface Mount, 12-LED, Amber	MPS121UD-A
Lamp Assembly, DOT, Red	8573213A



**FEDERAL SIGNAL**  
Safety and Security Systems

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[www.fedsig.com](http://www.fedsig.com)

Customer Support

Police/Fire-EMS: 800-264-3578 • +1 708 534-3400

Work Truck: 800-824-0254 • +1 708 534-3400

Technical Support: 800-433-9132 • +1 708 534-3400

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