



Safety Message to Installers 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 the lighting system, you must have a good understanding of automotive systems, along with proficiency in the installation and use of safety warning equipment.
- Do not install equipment or route wiring in the deployment path of an airbag.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- Frequently inspect the light system to ensure that it is operating properly and that it is securely attached to the vehicle.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- Refer to the instructions packed with related products for additional precautions and information.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.
- Do not stare directly into the lights at a close range or permanent damage to your eyesight may occur.

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

Introduction

MicroPulse perimeter lights feature an advanced high-output LED light head for additional warning around the outside of your vehicle. Available in solid and dual color models, MicroPulse lights can be programmed to operate as a single unit or in synchronization with multiple MicroPulse light heads. Built-in flash patterns enable multiple vehicle perimeter lights to be either synchronized in the same pattern or in reverse sequence.

Unpacking the Product

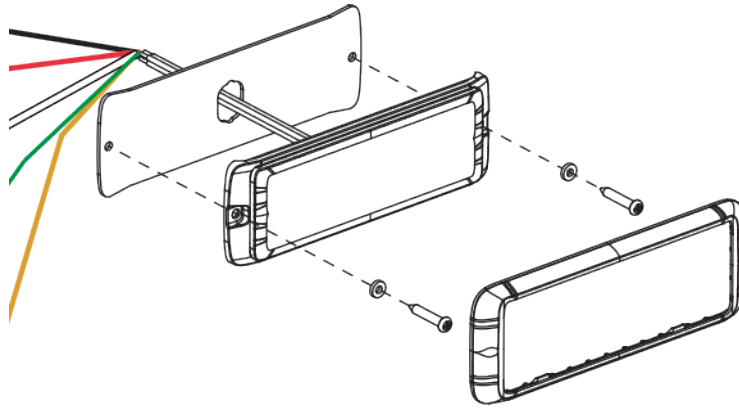
After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Failure to identify damage before installation could lead to rejection of any claim. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. If you are missing any parts, contact Federal Signal Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT).

Installing the MicroPulse® 1220 Ultra Dual Color

- Red: To +Vdc to activate Memory1
- Black: To Chassis Ground
- White: To +Vdc to activate Memory2 (Memory2 has a higher priority and overrides Memory1 when activated.)
- Green: To +Vdc for low power operation
- Yellow: For synchronization of flash patterns.

Connect the yellow wires of multiple units together for synchronization. (All heads must be set up correctly and use the same pattern upon power-up.)

Figure 1 Exploded view



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AIRBAG DEPLOYMENT: 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 or death.

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SEAT REMOVAL PRECAUTION: If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.

Making a Color Mode Selection

To select a Color Mode for each memory:

1. While either Memory1 or Memory2 is activated, apply +Vdc to the yellow wire for 3 seconds to enter Color Mode Selection.
2. Once in Color Mode Selection, the light head pulses in dim short (single, double or triple) flashes:
 - Single flash = Color1
 - Double flash = Color2
 - Triple flash = Color1 alternating Color2
3. Remove the yellow wire from +Vdc and momentarily apply it to +Vdc to change Color Mode.
4. Once the desired Color Mode is selected, power off or apply +Vdc to the yellow wire for 3 seconds to save and exit Color Mode Selection.

Synchronizing Multiple Units

Each unit contains 3 different Grouping Modes:

- MASTER (default)
- SLAVE-SYNC
- SLAVE-ALT

If synchronized flashing is not needed, select the desired flash pattern. See Table 1.

Table 1 Flash Patterns

1	Single 122 FPM	10	Single
2	Single 90 FPM	11	Mega
3	Single 113 FPM	12	Double
4	Triple (2.04 Hz)	13	Quad
5	Triple (1.25 Hz)	14	Quint
6	Double (R65)	15	Ultra
7	Quad (2 Hz)	16	Single-Quad
8	Random	17	Single-H/L
9	Steady	18	Single-Triple-Quint

For synchronized flashing, one unit should be set to MASTER mode while the others are set to SLAVE-SYNC or SLAVE-ALT mode.

1. To enter Grouping Mode selection, apply the +Vdc to the red, white, and yellow wires simultaneously. Once in Grouping Mode Selection, the unit will steady burn in low power and pulse in high power.
 - MASTER (default): Single pulse
 - SLAVE-SYNC: Double pulse
 - SLAVE-ALT: Triple pulse
2. Remove the yellow wire from +Vdc to change the mode.

NOTE: When there is no MASTER unit present, all SLAVE units flash initially and then steady burn for 2 seconds to detect any synchronization signal. This also helps you to easily distinguish between SLAVE vs. MASTER units.

Getting Technical Support

For technical support, please contact:

Federal Signal Corporation
Service Department
Phone: 1-800-433-9132
Email: empserviceinfo@fedsig.com

Getting Repair Service

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally. Any product returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain a 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 Dr.
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. 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 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.



FEDERAL SIGNAL Safety and Security Systems

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Customer Support

Police/Fire-EMS:	800-264-3578 • +1 708 534-3400
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Technical Support:	800-433-9132 • +1 708 534-3400

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