



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

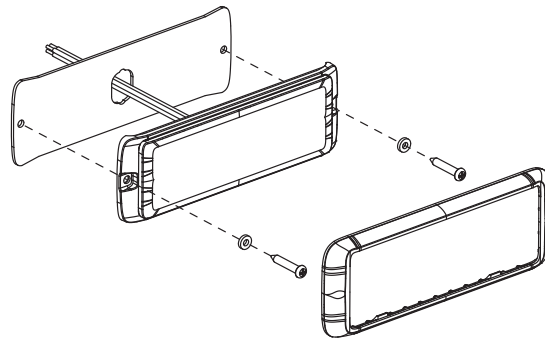
After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Failure to identify damage before installation could lead to rejection of any 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® 1200 or 1201 Ultra

- Red: To +Vdc (fuse @ 5 A)
- Black: To Chassis Ground
- White: For low power, apply +Vdc to the white wire
- Yellow: For Synchronization

Connect the YELLOW wires of all heads together for synchronization. (All heads must be set at the same pattern.)

Figure 1 Exploded view



Modes of Operation

⚠ WARNING

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.

⚠ WARNING

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.

Each unit has three modes: MASTER (default), SLAVE-SYNC, and SLAVE-ALT.

If synchronized flashing is not needed, select the desired flash pattern. For synchronized flashing, only one unit must be set to MASTER mode while all other units are set to SLAVE-SYNC or SLAVE-ALT mode:

1. To enter MODE selection, apply +Vdc to the RED and YELLOW wires simultaneously, or apply +Vdc to YELLOW for at least 4 seconds while the unit is activated. Once in MODE selection, the unit steady burns in low power and pulses in high power:
 - Single Pulse: MASTER (default)
 - Double pulse: SLAVE-SYNC
 - Triple pulse: SLAVE-ALT
2. Remove YELLOW wire from +Vdc and momentarily apply to +Vdc to change MODE:
 - SLAVE-SYNC units flash together with MASTER units.
 - SLAVE-ALT units alternate with SLAVE-SYNC and MASTER units.
3. To exit MODE selection, apply +Vdc to YELLOW for at least 4 seconds or disconnect all power.

NOTE: When there is no MASTER unit present, all SLAVE units flash initially and then steady burn for 2 seconds when no synchronization signal is detected. This is so that the installer/user can easily distinguish between SLAVE vs. MASTER units.

To select a flash pattern, momentarily apply +Vdc to the YELLOW wire once for the next pattern or quickly three times to reset.

Table 1 Flash Patterns

1	Single 122 FPM	14	Quad (All)
2	Single 90 FPM	15	Quint (All)
3	Single 113 FPM	16	Ultra (All)
4	Triple (2 Hz)	17	Single-Quad (All)
5	Triple	18	Single H/L
6	Double (R65)	19	Single (Split)
7	Quad (2 Hz)	20	Double (Split)
8	Random	21	Quad (Split)
9	Steady (Half)	22	Quint (Split)
10	Steady (All)	23	Ultra (Split)
11	Single (All)	24	Single-Quad (Split)
12	Mega (All)	25	Single H/L (Split)
13	Double (All)		

NOTE: This unit might not be factory-set at FP#1.

Setting up Split Flashing

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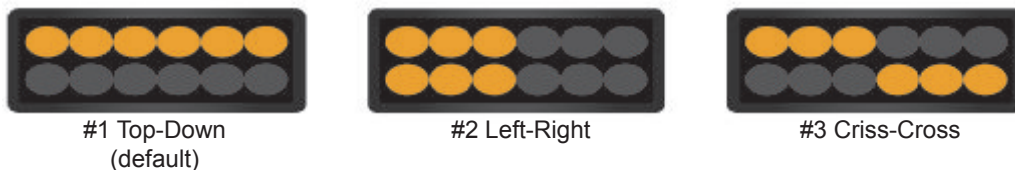
⚠ WARNING

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.

To change to split flashing:

1. To enter MODE selection, apply +Vdc to the RED and YELLOW wires simultaneously, or apply +Vdc to YELLOW for at least 4 seconds while the unit is activated. Once in MODE selection, the unit steady burns in low power and pulses in high power.
2. Remove the yellow wire from +Vdc and momentarily apply +Vdc to the white wire.

Figure 2 Split Flashing



3. To exit MODE selection, apply +Vdc to YELLOW for at least 4 seconds or disconnect all power.

NOTE: When there is no MASTER unit present, all SLAVE units flash initially and then steady burn for 2 seconds when no synchronization signal is detected. This is so that the installer/user can easily distinguish between SLAVE vs. MASTER units.

To change the flash pattern, momentarily apply +Vdc to the YELLOW wire once for the next pattern or quickly three times to reset. See Table 1 on page 2 for flash patterns.

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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