FEDERAL SIGNAL
Model Series 416300

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25500972 Rev A0 1124
Customer Support: 1-800-264-3578
Service Department: 1-800-433-9132
www.fedsig.com: 1-708-534-3400

⚠ WARNING

To properly install this light, you must have a good understanding of automotive procedures and systems, along with proficiency in the installation and use of safety warning equipment. Before installing this light, refer to the unabridged instructions for it, which are available online at www.fedsig.com . Print the online document and provide copies to the end users of this light and to the personnel who will service this light.

LED FLUSH MOUNT KIT USER MANUAL

12-24 VDC

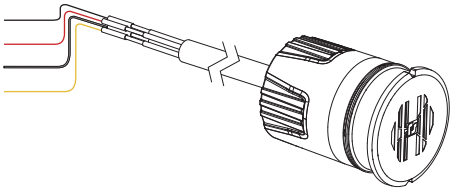
WIRING

SINGLE COLOR

To Chassis Ground: ..... BLACK
To +VDC for Memory 1 in Color 1(fuse at 1A): ..... RED
To +VDC for Memory 2 in Color 1(fuse at 1A): ..... WHITE
For Synchronization and Flash Pattern: ..... YELLOW

Connect YELLOW wires of all lightheads together for synchronization.
(All lightheads should be set to the same Flash Pattern)

PRIORITY: Memory 2 > Memory 1



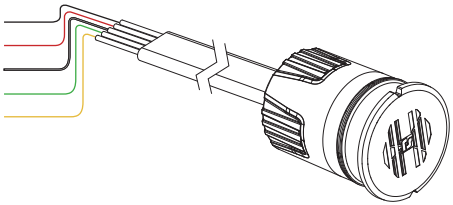
TRI COLOR

To Chassis Ground: ..... BLACK
To +VDC for Memory 1 in Color 1(fuse at 1A): ..... RED
To +VDC for Memory 2 in Color 2(fuse at 1A): ..... WHITE
To +VDC for Memory 3 in Color 3(fuse at 1A)*: ..... GREEN
For Synchronization and Flash Pattern: ..... YELLOW

Connect YELLOW wires of all lightheads together for synchronization.
(All lightheads should be set to the same Flash Pattern)

PRIORITY: Memory 3 > Memory 2 > Memory 1

***** *Tri Color Only*



OPERATION

FOR FLASH PATTERN SELECTION:

To select a flash pattern, momentarily apply YELLOW wire to **+VDC**:
- Once for next pattern
- Quick three times to Flash Pattern 1. (Refer to Flash Pattern chart)

COLOR / FLASH PATTERN DEFAULTS		
Warning Mode	**Single Color Model**	**Tri-Color Model**
Warning Mode 1	Pattern #1, Single 122	Color 1, Pattern #1, Single 122
Warning Mode 2	Pattern #10, Steady Break	Color 2, Pattern #1, Single 122
Warning Mode 3	NA	Color 3, Pattern #1, Single 122

FLASH PATTERN					
1	Single 122	8	Quad 122	15	Quint 73
2	Single 90	9	Random	16	Ultra 73
3	Single 113	10	Steady Break	17	Single-Quad
4	Triple 92.3	11	Single 73	18	Single H/L
5	Triple 122	12	Mega	19	Single-Triple-Quint
6	Triple 73	13	Double 73		
7	Double 122	14	Quad 73		

NOTE: The unit may not be factory set at FP#1.

COLOR MODE SELECTION		
No.	**Color Combination**	**Visual Feedback**
1	Color 1 only	1
2	Color 2 only	2
3	Color 3 only	3
4	Color 1 & Color 2	1 → 2
5	Color 2 & Color 1	2 → 1
6	Color 2 & Color 3	2 → 3
7	Color 3 & Color 2	3 → 2
8	Color 1 & Color 3	1 → 3
9	Color 3 & Color 1	3 → 1
10	Color 1, Color 2 & Color 3	1 → 2 → 3
11	Color 1, Color 3 & Color 2	1 → 3 → 2
12	Color 2, Color 1 & Color 3	2 → 1 → 3
13	Color 2, Color 3 & Color 1	2 → 3 → 1
14	Color 3, Color 1 & Color 2	3 → 1 → 2
15	Color 3, Color 2 & Color 1	3 → 2 → 1

Single flash Low Power Steady

COLOR MODE SETTING (TRI-COLOR MODEL ONLY)

Each MEMORY may flash in 15 Color Modes. Please refer to the color mode selection table.
To set the COLOR MODE:

1. Select the desired setting memory then apply **+Vdc** to RED or WHITE wires or GREEN wire (depend on the desired setting memory) then apply **+Vdc** to YELLOW wire for over 3 seconds.
2. Once in COLOR SELECTION MODE, the unit will pulses in low power in different color mode.
3. Remove the YELLOW wire from **+Vdc** then momentarily apply to **+Vdc** to change the COLOR MODE.
4. Exit COLOR SELECTION MODE by (a) Applying **+Vdc** to YELLOW wire for over 3 seconds or (b) Disconnecting all power.

STEADY BREAK SHORTCUT (FOR PATHFINDER FLASHER APPLICATION)

This shortcut allows the light head to be programmed easily and quickly as Pattern #10 Steady Break for each wire.

1. Activate Warning Mode 1, Warning Mode 2 or Warning Mode 3 by applying **+Vdc** to the **RED**, **WHITE** or **GREEN** wire, respectively.
2. Apply **+Vdc** to the **YELLOW** wire for over 3 seconds to enter COLOR SELECTION MODE.
3. Release and reapply **+Vdc** to the **YELLOW** wire over 3 seconds to set all trigger wires to Steady Break. The light head flashes three times and turns to low power Steady Burn.
4. Disconnect the light head from the power to finish the setting.

STEADY BREAK SHORTCUT		
Warning Mode	**Single Color Model**	**Tri-Color Model**
Warning Mode 1	Pattern #10 , Steady Break	Color 1, Pattern #10 , Steady Break
Warning Mode 2	Pattern #10 , Steady Break	Color 2, Pattern #10 , Steady Break
Warning Mode 3	NA	Color 3, Pattern #10 , Steady Break

RETURN TO FACTORY DEFAULT

1. Apply **+Vdc** to the **RED**, **WHITE**, and **GREEN** wires together.
2. Apply **+Vdc** to the **YELLOW** wire for 3 seconds; the light head turns off. Release the **YELLOW** wire to enter group mode selection.
3. Apply **+Vdc** to the **YELLOW** wire for over 3 seconds; the light head flashes ten times and then back to low power steady.
4. Disconnect all power to exit color mode selection. All memory turns to factory default.

MULTI-UNIT SYNCHRONIZATION

Each unit can be set as different group for synchronization
(1) CONTROLLER (default), (2) FOLLOWER-SYNC, and (3) FOLLOWER-ALT. If synchronized flashing is not required, select the desired flash pattern.

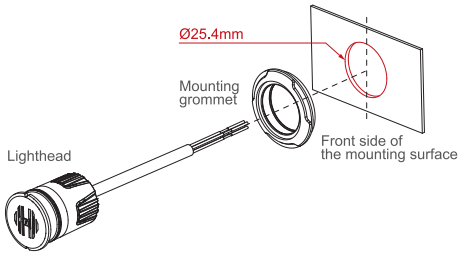
For synchronized flashing, only one unit should be set to the CONTROLLER , while all other units must be set to FOLLOWER-SYNC or FOLLOWER-ALT group:

1. Enter GROUPING MODE SELECTION by applying **+Vdc** to **RED**, **WHITE** and **GREEN** (Tri-Color) simultaneously and then applying **+Vdc** to the **YELLOW** wire for 3 seconds.
2. Once in GROUPING MODE SELECTION, the Color 1 LED will steady-burn in low-power and pulse in:
   - Single pulse = CONTROLLER (default)
   - Double pulse = FOLLOWER-SYNC
   - Triple pulse = FOLLOWER-ALT
3. Remove the **YELLOW** wire from **+Vdc** and then momentarily apply it to **+Vdc** to change to the next Group:
   - FOLLOWER-SYNC units flash simultaneously with the CONTROLLER unit.
   - FOLLOWER-ALT units flash alternately with the CONTROLLER unit and all other FOLLOWER-SYNC units.
4. Once in the desired group, exit SETTING MODE by applying **+Vdc** to the **YELLOW** wire for over 3 seconds or disconnecting all power.

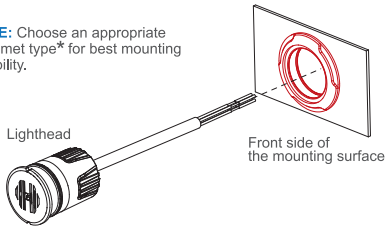
   NOTE: If no CONTROLLER unit is present, all FOLLOWER units flash initially and steady burn for 2 seconds to detect any synchronization signal. The installer/user may also use this to easily pick out FOLLOWER vs. CONTROLLER units.

INSTALLATION - FLUSH MOUNT

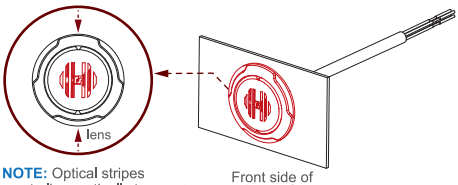
1 Select a mounting location and drill a 1" (25.4mm) cut-out.



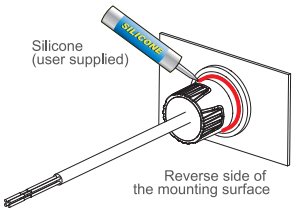
2 From the front, install the appropriate MOUNTING GROMMET onto the cut-out, and insert the LIGHTHEAD.



3 Ensure that the optical stripes are aligned vertically.



4 Where necessary, apply silicone around the reverse side to prevent from rotating.



* (2) mounting grommets are included for various material thicknesses.
  Standard Grommet : Surface thickness @0.8~2.0mm
  Thick Grommet : Surface thickness @2.7~3.9mm