

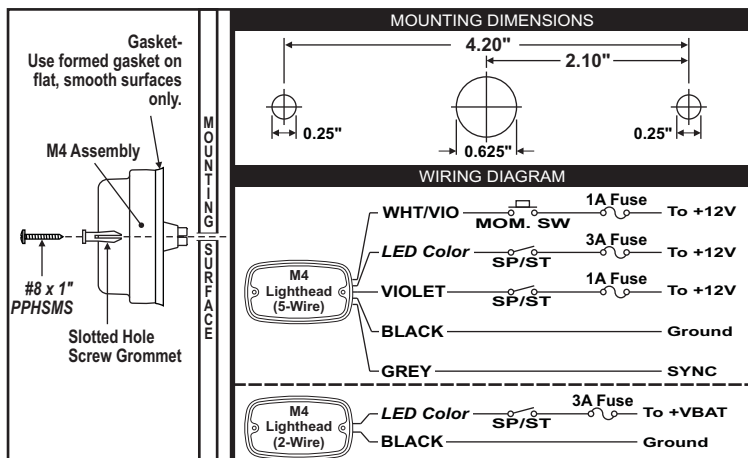
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Safety First: This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.
- Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.
- Failure to use specified installation parts and/or hardware will void the product warranty!
- If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.
- Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.
- For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.
- Do not attempt to activate or control this device in a hazardous driving situation.
- If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.
- This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.
- Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.
- WARNING! All customer supplied wires that connect to the positive (+) terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED "at the battery" to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!
- FAILURE TO FOLLOW THESE PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!

Mounting

- Using the dimensions below, mark the mounting and wire hole locations onto the proposed mounting surface. Drill two, .250" diameter mounting holes and a .625" (minimum) wire access hole into the mounting surface.
- Place the gasket into position on the rear of the M4 assembly. Insert the slotted hole screw grommet through the mounting holes on the M4/Gasket assembly.
- Feed the M4 wires through the wire access hole in the mounting surface. Press the M4/Gasket/Grommet assembly onto its mounting location so that it is flat against the mounting surface. With the assembly in position and using the hardware provided, tighten the mounting screws until the lighthouse assembly is drawn firmly against the mounting surface. DO NOT OVERTIGHTEN!
- Using appropriately sized wires (minimum 18 AWG), extend the M4 wires to their designated connections. Refer to the diagram below for wiring and fusing information.



RED - Flash Mode:

Apply +VBAT to the RED wire to activate the lighthouse in "flash mode". In flash mode, you may change the flash pattern using Scan-Lock™.

GREY - SYNC: To SYNC 2 lighthouses, configure both lighthouses to display the same Phase 1 (Simultaneous) pattern. Turn power off and connect the GREY wire from each lighthouse together. Activate the lighthouses and their patterns will be synchronized. To configure 2 lighthouses to alternate their patterns, advance either lighthouse to Phase 2 (Alternating) of the current pattern.

VIOLET - Low Power:

The type of switch used depends on how the operator wishes the Low Power feature to function:
Latching Mode: By applying +VBAT to the VIO wire for less than 1 sec., the lighthouse is "latched" into low power. The unit must be turned off and then back on to restore normal operation (momentary switch).
Level Mode: Applying +VBAT to the VIO wire for more than 1 sec. holds the lighthouse in low power mode until voltage is removed (toggle switch). **Note: There are 5 levels of low power intensity.**

Waterproof butt splices and/or connectors are required if that connection could be exposed to moisture. Any unused wires must be sealed (waterproofed) to prevent moisture infiltration.

IMPORTANT WARNING!

CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

#	Pattern	Seq.	Phase							
1	SignalAlert™	Solid	PH.1	44	LongBurst™	L/R	PH.2	87	ActionFlash™150	T/B
2	SignalAlert™	Solid	PH.2	45	LongBurst™	T/B	PH.1	88	ActionFlash™150	Diag
3	SignalAlert™	L/R	PH.1	46	LongBurst™	T/B	PH.2	89	ModuFlash™	Solid
4	SignalAlert™	L/R	PH.2	47	LongBurst™	Diag	PH.1	90	ModuFlash™	L/R
5	SignalAlert™	T/B	PH.1	48	LongBurst™	Diag	PH.2	91	ModuFlash™	T/B
6	SignalAlert™	T/B	PH.2	49	PingPong™	Solid	PH.1	92	ModuFlash™	Diag
7	SignalAlert™	Diag	PH.1	50	PingPong™	Solid	PH.2	93	DoubleFlash 120	Solid
8	SignalAlert™	Diag	PH.2	51	PingPong™	L/R	PH.1	94	DoubleFlash 120	L/R
9	CometFlash@75	Solid	PH.1	52	PingPong™	L/R	PH.2	95	ModuFlash 120	T/B
10	CometFlash@75	Solid	PH.2	53	PingPong™	T/B	PH.1	96	DoubleFlash 120	Diag
11	CometFlash@75	L/R	PH.1	54	PingPong™	T/B	PH.2	97	PingPong™120	Solid
12	CometFlash@75	L/R	PH.2	55	PingPong™	Diag	PH.1	98	PingPong™120	L/R
13	CometFlash@75	T/B	PH.1	56	PingPong™	Diag	PH.2	99	PingPong™120	T/B
14	CometFlash@75	T/B	PH.2	57	SingleFlash 60	Solid	100	PingPong™120	Diag	
15	CometFlash@75	Diag	PH.1	58	SingleFlash 60	L/R	101	TripleFlash™75	Solid	
16	CometFlash@75	Diag	PH.2	59	SingleFlash 60	T/B	102	TripleFlash™75	L/R	
17	DoubleFlash 75	Solid	PH.1	60	SingleFlash 60	Diag	103	TripleFlash™75	T/B	
18	DoubleFlash 75	Solid	PH.2	61	SingleFlash 90	Solid	104	TripleFlash™75	Diag	
19	DoubleFlash 75	L/R	PH.1	62	SingleFlash 90	L/R	105	TripleFlash™120	Solid	
20	DoubleFlash 75	L/R	PH.2	63	SingleFlash 90	T/B	106	TripleFlash™120	L/R	
21	DoubleFlash 75	T/B	PH.1	64	SingleFlash 90	Diag	107	TripleFlash™120	T/B	
22	DoubleFlash 75	T/B	PH.2	65	SingleFlash 120	Solid	108	TripleFlash™120	Diag	
23	DoubleFlash 75	Diag	PH.1	66	SingleFlash 120	L/R	109	Action SF 60/120	Solid	
24	DoubleFlash 75	Diag	PH.2	67	SingleFlash 120	T/B	110	Action SF 60/120	L/R	
25	SingleFlash 75	Solid	PH.1	68	SingleFlash 120	Diag	111	Action SF 60/120	T/B	
26	SingleFlash 75	Solid	PH.2	69	SingleFlash 300	Solid	112	Action SF 60/120	Diag	
27	SingleFlash 75	L/R	PH.1	70	SingleFlash 300	L/R	113	Action SF 60/TF 120	Solid	
28	SingleFlash 75	L/R	PH.2	71	SingleFlash 300	T/B	114	Action SF 60/TF 120	L/R	
29	SingleFlash 75	T/B	PH.1	72	SingleFlash 300	Diag	115	Action SF 60/TF 120	T/B	
30	SingleFlash 75	T/B	PH.2	73	DoubleFlash 150	Solid	116	Action SF 60/TF 120	Diag	
31	SingleFlash 75	Diag	PH.1	74	DoubleFlash 150	L/R	117	PinWheel SLOW		
32	SingleFlash 75	Diag	PH.2	75	DoubleFlash 150	T/B	118	PinWheel MEDIUM		
33	ComAlert™	Solid	PH.1	76	DoubleFlash 150	Diag	119	PinWheel FAST		
34	ComAlert™	Solid	PH.2	77	ComAlert™ 150	Solid	120	PinWheel VARIABLE		
35	ComAlert™	L/R	PH.1	78	ComAlert™ 150	L/R	121	PinWheel MEDIUM w/Solid		
36	ComAlert™	L/R	PH.2	79	ComAlert™ 150	T/B	122	CalScan		
37	ComAlert™	T/B	PH.1	80	ComAlert™ 150	Diag	123	ActionScan™		
38	ComAlert™	T/B	PH.2	81	ActionFlash™150	Solid	124	SignalAlert™ Steady		
39	ComAlert™	Diag	PH.1	82	ActionFlash™150	L/R	125	Steady		
40	ComAlert™	Diag	PH.2	83	ActionFlash™150	T/B				
41	LongBurst™	Solid	PH.1	84	ActionFlash™150	Diag				
42	LongBurst™	Solid	PH.2	85	ActionFlash™150	Solid				
43	LongBurst™	L/R	PH.1	86	ActionFlash™150	L/R				

BOLD = Cal. Title XIII Compliant *ITALIC = SYNC* L/R=Left/Right T/B=Top/Bottom

WHITE/VIO - Scan-Lock™ Pattern Selection: This feature allows the user to select from several available flash patterns. Lighthouse must be switched on for Scan-Lock to work.

TO CYCLE THROUGH ALL PATTERNS: Apply +VBAT to the WHT/VIO wire for less than 1 second and release. To cycle backward through patterns apply +VBAT to WHT/VIO wire for over 1 second and release.

TO SET A PATTERN AS DEFAULT: Allow pattern to run over 5 seconds to make it the default pattern.

TO RESET TO THE FACTORY DEFAULT PATTERN: Turn off power. While applying +VBAT to the WHT/VIO wire, turn power on. The lighthouse will reset to its default pattern.

M4 Sequencing & Phasing: The M4 lighthouse has 4 sets of 3 LEDs. These sets cycle through the 4 sequences shown.

Sequences	Operation of LED sets
Solid	All On Alternates with All Off
Left to Right	1 - 3 Alternates with 2 - 4
Top to Bottom	1 - 2 Alternates with 3 - 4
Diagonal	1 - 4 Alternates with 2 - 3

