


**WARNING!**

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!



**Do not install and/or operate this safety product unless you have read and understand the safety information contained**

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of you and those you are seeking to protect.
2. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation are vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that s/he can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure during use that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
7. The use of this or any other warning device does not ensure all drivers can or will observe or react to a warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes.
8. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding warning signal devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

### Specifications:

Size:	W: 167mm Dia. x 85mm H
Weight:	0.85kg
Voltage:	10-32V DC Systems
Current Draw @ 13.8VDC:	4.4A Peak, 1.6A Max
Current Draw @ 27.6VDC:	2.2A Peak, 0.8A Max
Flash Rate:	See Flash Pattern Chart
Temp. Range:	-40°C to +60°C
Reverse polarity protection.	
Ambient light sensor (refer flash pattern table).	
Certifications:	Ingress Protection: IP69K EMC: ECE R10, CISPR-25, ACMA RCM SAE J845 Class 1 - refer flash pattern table.

### Installation & Mounting:

Carefully remove the beacon and place it on a flat surface. Examine the unit for transit damage, broken lenses, etc. If damage is found, contact the transit company or distributor. Do not use damaged or broken parts.

### Permanent Mounting:

**Caution:** When drilling into any vehicle surface, make sure the area is free from any electrical wires, fuel lines, vehicle upholstery, etc. that could be damaged

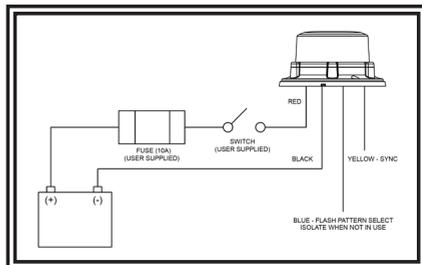
Position the beacon in the desired mounting location. Using the base flange as a template, mark the mounting hole locations. Drill three 5.2mm mounting holes. Drill a hole for power wire routing as desired. The use of a grommet or silicone is required for wires passing through compartment walls, or where sealing is required. Secure the beacon in place using the included #10 hardware.

### Wiring Instructions:

**Important!** This unit is a safety device, and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail.

Wiring for single colour beacons is as shown in FIGURE 1. All wiring should be a minimum of 2mm<sup>2</sup>. The positive line must have a 10A automotive fuse, as shown. A switch may be used to control the on/off function. Route the ground wire directly back to negative battery terminal. Pack dielectric grease, such as Dow Corning 4, around each electric connection exposed to moisture or the ambient environment.

**Important!** Disable power before wiring the beacon.



## Wire Functions:

Wire:	Function:
Red	Positive
Black	Negative
Yellow	Sync
Blue	Flash pattern change to Negative

## Flash Pattern Selection:

Apply Blue to Black wire:	
Push Times:	Function:
0 ~ 1 sec.	next pattern
1 ~ 3 sec.	previous pattern
3 ~ 5 sec.	factory default pattern
5 ~ sec.	last pattern

## Synchronisation:

Syncing capabilities are available with all compatible ECCO products via the yellow wire with the flash patterns indicated in the charts below:

- Determine the desired style of flash pattern for each unit and set each unit individually (without the yellow wires connected together) to avoid confusion. It is also strongly recommended that the same style of flash pattern be used on all units to produce the most effective warning pattern. NOTE: Phases 1 and 2 for each style of flash pattern in the table denote the relative timing between units connected in a synchronizing installation. To operate simultaneously, each unit must be set to the same phase (1 + 1 or 2 + 2); to operate alternately, units must be set to have the opposite phase (1 + 2 or 2 + 1).
- Connect the yellow sync wires together and check that the units are flashing in a synchronized manner as expected. If a pattern on one unit appears incorrect, the blue pattern select wire can be used to cycle forward or backward on that individual unit until the correct pattern is selected. Note: This will only change the pattern in the one unit and will not affect the other units connected to the yellow sync wire.
- If the yellow wire is unused, leave unconnected and insulated.

EB8160A LED Beacon Flash Patterns							
PATTERN	MODE	DESCRIPTION	SYNC	FPM	SAE J845	T13	AUTO DIM
1	1	Single Flash Phase 1	Yes	75	CLASS 1A	CLASS E	No
	2	Single Flash Phase 2	Yes				
2	3	Single Flash Phase 1	Yes	120	CLASS 1A		Yes
	4	Single Flash Phase 2	Yes				
3	5	Double Flash Phase 1	Yes	75	CLASS 1A	CLASS E	No
	6	Double Flash Phase 2	Yes				
4	7	Double Flash Phase 1	Yes	120	CLASS 1A		Yes
	8	Double Flash Phase 2	Yes				
5	9	Quad Flash Phase 1	Yes	75	CLASS 1A		No
	10	Quad Flash Phase 2	Yes				
6	11	Quad Flash Phase 1	Yes	120	CLASS 1A		Yes
	12	Quad Flash Phase 2	Yes				
7	13	Slow Rotate Phase 1	Yes	120			No
	14	Slow Rotate Phase 2	Yes				
8	15	Fast Rotate Phase 1	Yes	150			No
	16	Fast Rotate Phase 2	Yes				
9	17	Rotate / Quad Phase 1	Yes	N/A			No
10	18	Pulse Phase 1	Yes	60			No
	19	Pulse Phase 2	Yes				
11	20	Steady Burn	No	N/A			No

<b>EB8160X Variants</b>			
<b>Part Number</b>	<b>DESCRIPTION</b>	<b>SYNC</b>	<b>Certified</b>
EB8160A	LED HD BEACON,3 BOLT,10-30VDC,AMBER	Yes	Yes - see page 1
EB8160B	LED HD BEACON,3 BOLT,10-30VDC,BLUE	Yes	Yes - see page 1
EB8160CA	LED HD BEACON,3 BOLT,10-30VDC,CA	Yes	Yes - see page 1
EB8160CB	LED HD BEACON,3 BOLT,10-30VDC,CB	Yes	Yes - see page 1
EB8160CG	LED HD BEACON,3 BOLT,10-30VDC,CG	Yes	Yes - see page 1
EB8160CR	LED HD BEACON,3 BOLT,10-30VDC,CR	Yes	Yes - see page 1
EB8160CW	LED HD BEACON,3 BOLT,10-30VDC,CW	Yes	Yes - see page 1
EB8160G	LED HD BEACON,3 BOLT,10-30VDC,GREEN	Yes	Not Certified
EB8160R	LED HD BEACON,3 BOLT,10-30VDC,RED	Yes	Yes - see page 1

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# Warranty

## Manufacturer Limited Warranty and Limitation of Liability:

Manufacturer warrants that on the date of purchase, this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

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