



# Installation and Operation Instructions ED9215 WARNING & WORKLIGHT COMBINATION

**IMPORTANT!** Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



**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 understood the safety information contained in this manual.**

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. 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 is 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 they can operate the system without losing eye contact with the roadway.
5. It is the responsibility of the vehicle operator to ensure daily 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.
6. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is the vehicle operator's responsibility to be sure they can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
7. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning 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:

<b>Size:</b>	2.75"W x 13.75"H x 3.0"D
<b>Weight:</b>	4.12 lbs.
<b>Input Voltage:</b>	12-24 VDC
<b>Input Current:</b>	3.26 A max. @ 12 VDC (Nominal)
<b>Flash Rate:</b>	See flash pattern chart
<b>Output Power:</b>	CENTER WORKLIGHTS PLUS WHITE WARNING LIGHTS - 19W CENTER WORKLIGHTS - 42W
<b>Temp. Range:</b>	-40°C to 60°C -40°F to 140°F

## Installation and Mounting:

Carefully remove the unit from its packaging. Examine the unit for transit damage. If damage is found, return the product to your local dealer for warranty replacement. Do not use damaged or broken parts. Determine a mounting location with the least amount of curvature as possible. Also, ensure there is a clear line of sight for oncoming traffic.

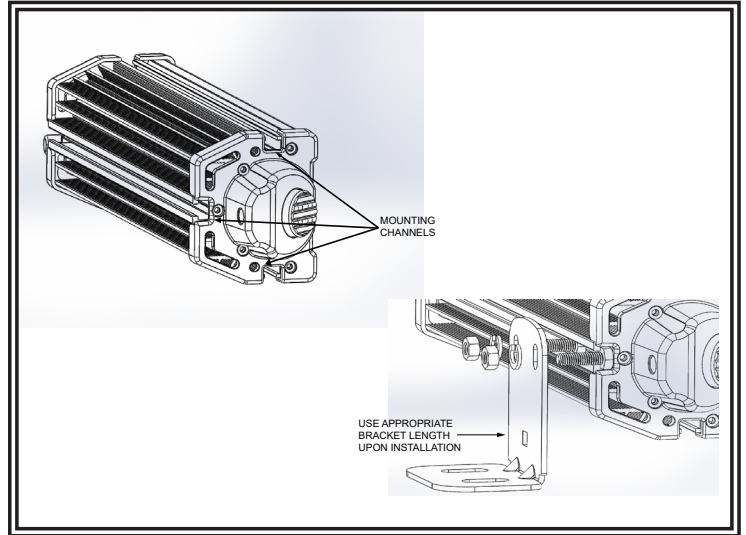


### CAUTION!

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

## Surface Mounting:

1. Insert the hex head bolts into the channel that best fits the position that the product will be mounted and loosely assemble the bracket onto the light as shown in Figure 1.
2. Using the slots on the brackets as templates, mark the holes for location. Drill holes in the mounting surface, matching the holes in the bracket.
3. Secure the light in place with user supplied hardware.

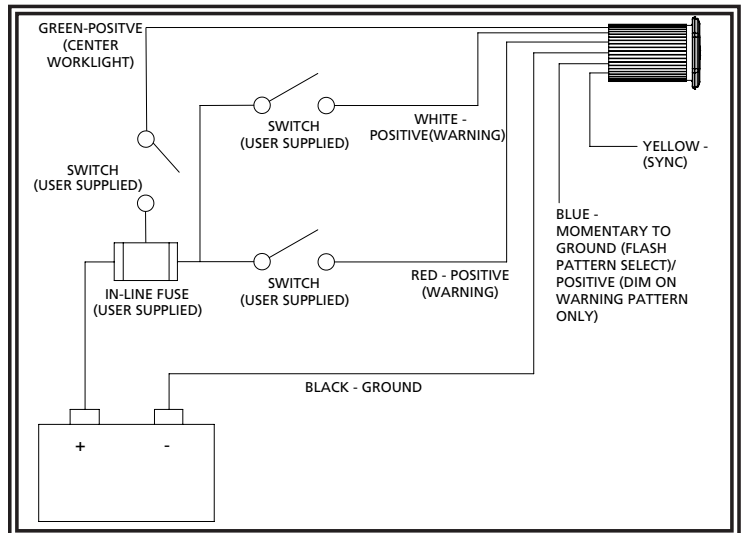


**Figure 1**

## Wiring Instructions:

The ED9215 warning and worklight combinations are self flashing. All wiring should be stranded and a minimum of 20 AWG. The positive line must have an in-line 10 Amp slow-blow fuse for each directional as shown in FIGURE 2. Isolate the yellow and blue wires when not in use.

**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.**



**Figure 2**

## Flash Pattern Selection:

### APPLY BLUE TO BLACK WIRE:

- Hold for less than 1 second for the next flash pattern.
- Hold between 1-3 seconds to go to the previous flash pattern.

- Hold between 3-5 seconds for factory default.
- Hold for more than 5 seconds for flash pattern #69.

## Synchronization:

This device is capable of syncing up to 8 compatible ECCO products by following the steps below. This device can be synchronized within flash pattern 1 to 63.

1. Set the desired flash pattern on each unit individually. 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).
2. 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.

Flash Pattern Chart Tabla de patrones de destello Tableau des effets clignotants															
PATTERN	MODE 1 (Red Line) MODE 2 (White Line) MODE 3 (Red Line & White Line)	Pattern	SYNC	SAE J595				CA T13				SAE J845			
				RED	AMBER	WHITE	RED	AMBER	WHITE	RED	AMBER	WHITE	RED	AMBER	WHITE
1	1	SAE/T13 SAE/T13 Single 75FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	Class B	Class B	Class B	Class 1	Class 1	Class 1	Class 1	
	2	SAE/T13 SAE/T13 Single 75FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	Class B	Class B	Class B	Class 1	Class 1	Class 1	Class 1	
	3	SAE/T13 Single 75FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	4	SAE/T13 Single 75FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	5	SAE/T13 Single 75FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	Class B	Class B	Class B	Class 1	Class 1	Class 1	Class 1	
	6	SAE/T13 Single 75FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	Class B	Class B	Class B	Class 1	Class 1	Class 1	Class 1	
	7	SAE/T13 Single 75FPM Ph1 Color 1 Synchronous Color 3 Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	8	SAE/T13 Single 75FPM Ph2 Color 1 Synchronous Color 3 Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	9	SAE/T13 Single 75FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
2	10	Single 375FPMFPM Ph1 Color 1 Synchronous Color 3	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	11	Single 375FPMFPM Ph2 Color 1 Synchronous Color 3	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	12	Single 375FPMFPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	13	Single 375FPMFPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	14	Single 375FPMFPM Ph1 Color 2 Synchronous Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	15	Single 375FPMFPM Ph2 Color 2 Synchronous Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	16	Single 375FPMFPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	17	Single 375FPMFPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	18	Single 375FPMFPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
3	19	SAE/T13 Double 75FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	20	SAE/T13 Double 75FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	21	SAE/T13 Double 75FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	22	SAE/T13 Double 75FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	23	SAE/T13 Double 75FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	24	SAE/T13 Double 75FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	25	SAE/T13 Double 75FPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	26	SAE/T13 Double 75FPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	27	SAE/T13 Double 75FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
4	28	ECER65/SAE Double 120FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	29	ECER65/SAE Double 120FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	30	ECER65/SAE Double 120FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	31	ECER65/SAE Double 120FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	32	ECER65/SAE Double 120FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	33	ECER65/SAE Double 120FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 1	
	34	ECER65/SAE Double 120FPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	35	ECER65/SAE Double 120FPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	36	ECER65/SAE Double 120FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
5	37	SAE/T13 Triple 75FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 2	
	38	SAE/T13 Triple 75FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 2	
	39	SAE/T13 Triple 75FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	40	SAE/T13 Triple 75FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	41	SAE/T13 Triple 75FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 2	
	42	SAE/T13 Triple 75FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 1	Class 1	Class 1	Class 2	
	43	SAE/T13 Triple 75FPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	44	SAE/T13 Triple 75FPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	45	SAE/T13 Triple 75FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
6	46	SAE/T13 Quad 75FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	47	SAE/T13 Quad 75FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	48	SAE/T13 Quad 75FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	49	SAE/T13 Quad 75FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	50	SAE/T13 Quad 75FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	51	SAE/T13 Quad 75FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	52 - Default	SAE/T13 Quad 75FPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	53	SAE/T13 Quad 75FPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	54	SAE/T13 Quad 75FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
7	55	ECER65/SAE Quad 120FPM Ph1 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	56	ECER65/SAE Quad 120FPM Ph2 Color 1 Synchronous Color 3	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	57	ECER65/SAE Quad 120FPM Ph1 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	58	ECER65/SAE Quad 120FPM Ph2 Color 1 Alternately Color 4	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	59	ECER65/SAE Quad 120FPM Ph1 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	60	ECER65/SAE Quad 120FPM Ph2 Color 2 Synchronous Color 4	yes	Class 1	Class 1	Class 1	Class 1	N/C	N/C	N/C	Class 2	Class 2	Class 2	Class 2	
	61	ECER65/SAE Quad 120FPM Ph1 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	62	ECER65/SAE Quad 120FPM Ph2 (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	63	ECER65/SAE Quad 120FPM (Color 1 Alternately Color 2) Alternately (Color 3 Alternately Color 4)	yes	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
8	64	Modulation (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	9	2 Double, 2 Quad (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	10	4 Single, 2 Triple (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	11	1 Double 1 Triple 1 Quad (Color 1 Synchronous Color 3) Alternately (Color 2 Synchronous Color 4)	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	68	Steady burn-Color 1 & 3	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	
	69	Steady burn-Color 2 & 4	no	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	