



## Installation Instructions

### Size 4 Distance Marker Signs

— DO NOT DISCARD —  
Important information for AIRPORT MAINTENANCE DEPT

#### To install:

1. Locate the power cord (#1). It will be visible protruding from the power leg slipfitter aluminum column and coupling.

**Note: in a typical remote L867 base can installation, the sign leg is connected to the remote can with 2" rigid galvanized steel (RGS) conduit. An isolation transformer secondary extension cord (#3) is fed through the conduit and connects the sign power cord plug to the isolation transformer secondary plug.**

2. Locate the cable clamp (#4, provided with the sign for most new sign installations). Tighten the cable clamp (#4) onto the isolation transformer secondary extension cord female plug at grade level. The cable clamp should nest on the under side of the floor flange (#2) and on top of the conduit (#5) that is flush with the surface of the concrete mounting pad. Insert the power cord plug (male) into the isolating transformer secondary extension cord plug (female).

**Note: As required by the FAA, this ensures that the power cord will be disconnected/unplugged in the event that the sign is knocked over.**

3. Lift the sign upright into place on the cement pad. Use the sign as a template to locate and mark mounting holes. Place sign off to one side and install anchor bolts. Recommended anchor bolts: 5/8" x 5" for mode 2 & 3 signs. Position sign over the anchor bolts and fasten the floor flanges to the cement pad with lockwashers and nuts.

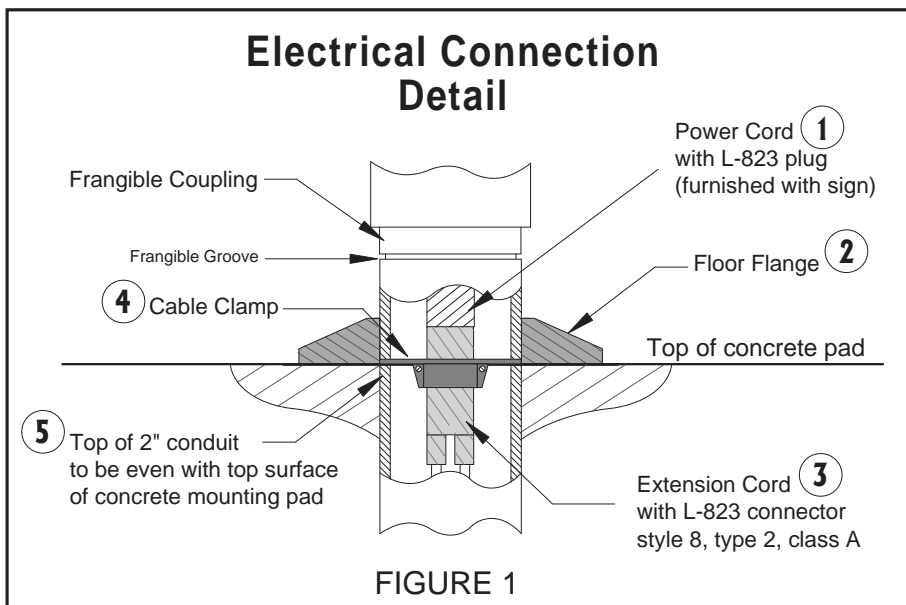
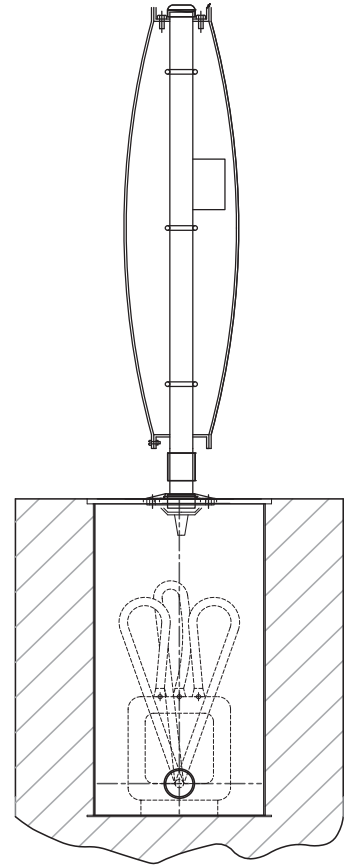
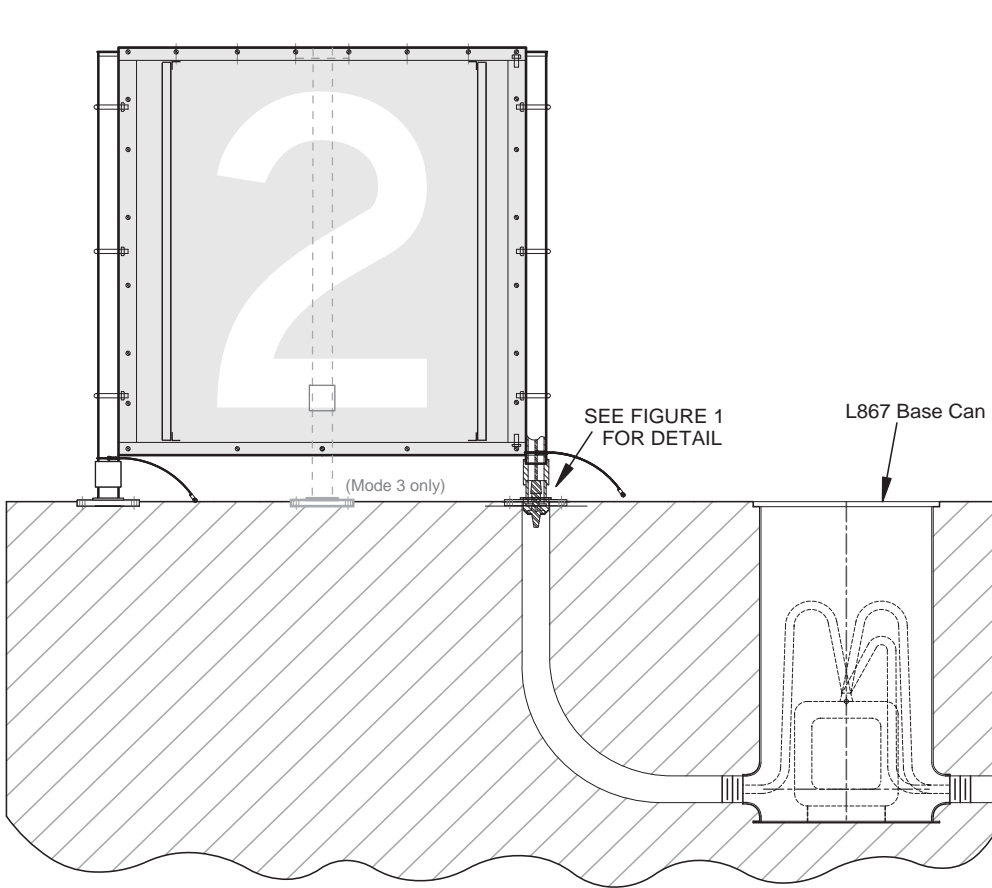
4. Electrical adjustments are now required. Power supply settings have been factory set but must be rechecked with an RMS meter once installed in the airfield environment. Please refer to the "Parts & Electrical Information" sheet for the lighting system being installed. Follow the "Installation" portion of those directions to ensure that the electrical settings are correct.

5. Replace any covers or access doors that had been removed.

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#### STANDARD SIGNS, INC.

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## Installation Guidance, Size 4 Distance Remaining Sign

Section G: "Distance Markers & Unlighted Signs"

**DO NOT DISCARD**  
Important information for AIRPORT MAINTENANCE DEPT

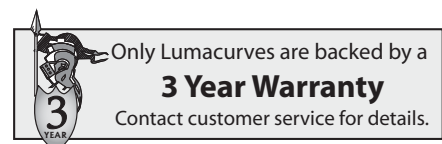
Installation of LUMACURVE Size 4 Distance Remaining Signs should be in accordance with FAA Advisory Circular 150/5345-18. A pad dimension sheet is available upon request. Separate literature sheets on lighting system technical information and adjustment guidance are available upon request. See **Distance Remaining Signs Technical Information** sheet for details on sign construction and parts.

**WARNING:** LUMACURVE Distance Remaining signs with lighting systems that use 30V/50W Train lamps or 20W quartz lamps are designed to operate on circuits along with other lighting fixtures that represent resistive load, such as non LED edge lights. They may not operate properly on circuits dedicated exclusively to airfield signs. For lighting systems designed for dedicated sign circuits, please see information on style 5 lighting systems described in the **LUMACURVE Taxiway and Runway Guidance Sign Installation Instructions** pamphlet.

### TO INSTALL:

**VERY IMPORTANT:** Lock out power to the site before installation.

1. Carefully lay sign on its side near the isolation transformer housing in the mounting pad.
2. If a base plate and/or floor flange(s) are not on the sign, install them now.
3. Check the tightness of the frangible couplings and pipe couplings. Be careful! Too much torque on the couplings can cause damage to the sign. Couplings, however, should be adequately tight.
4. Verify that the isolation transformer wattage matches the requirement listed on the sign ID tag. Place the isolation transformer in the housing and connect the secondary lead to the sign plug. Clamp the knob in the bottom of the base plate.
5. Connect the isolation transformer to the primary circuit.
6. Lift the sign upright and position it over the transformer housing and/or floor flange mounting studs and tighten down. If lag screws are being used, they can be located and installed now.
7. Draw the power cord slack up into the sign so that the sign will unplug in the base plate if the sign is knocked over.



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10/11  
g20. Installation, Size4DistanceMarker



# LUMACURVE PARTS LIST

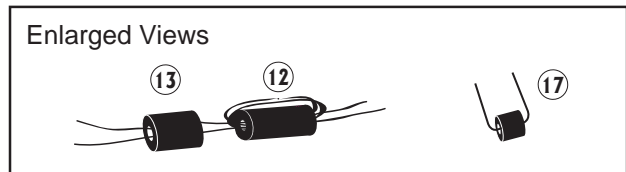
## Size 4 Distance Remaining Sign

### LED Lighting System

**Certified to current FAA Advisory Circular 150/5345-44**  
 Specification for Runway and Taxiway Signs  
*View our Certificate of Conformance*

#### LED Lighting System

	<i>Item</i>	<i>Description</i>
1a.	DCLT-1A	Leg Cap
*1.	D-1	Leg
2.	D-2	Top/Bottom Channel
3.	DTG-2	End Panel
*4.	D-4AB	U-Bolts w/ nuts & washers
5.	D-4ABC	Access Door (handle on power side)
6.	210/220/230/232	1/4" Hardware
7.	394	1/4" x 3/4" Hex Head
8.	D-8P	Light Bar
9.	D-15	48" x 48" legend panel
10.	LED Lamp	4W LED Lamp
11.	500	Lampholder
12.	G Ferrite A	Ferrite Core Split
13.	G Ferrite B	Ferrite Core Not Split
14.	480	Cable Clamp
15.	L610	LED PCB Controller, DC (1-12 lamps)
16.	G Low Pass Filter	ALD Low Pass Filter
17.	E416	Surge Protector
18.	2" Al Coupling	2" Pipe Coupling
*19.	140A	Frangible Coupling-2600 ft/lbs
*20.	15-XHDT	5" x 8" Aluminum Floor Flange
21.	CLT-19	Tether
22.	430	Cord & Plug
23.	420	Terminal Strip (6 block)
24.	PS Bracket	Angle Brackets
25.	3/8" Conduit	Flexible Conduit
26.	G EMI Shield Screen	Controller Screen
27.	360	3/8" Hardware



*\*Mode 3 parts may be different or not listed.  
 Please call for more information.*

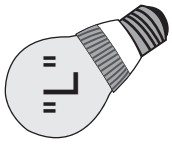
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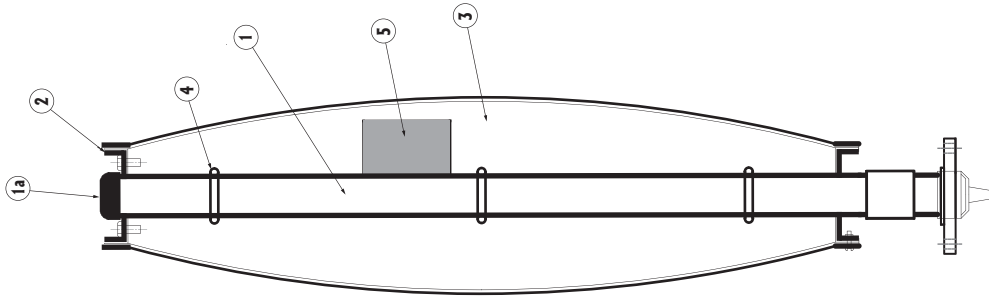
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# LUMACURVE PARTS LIST

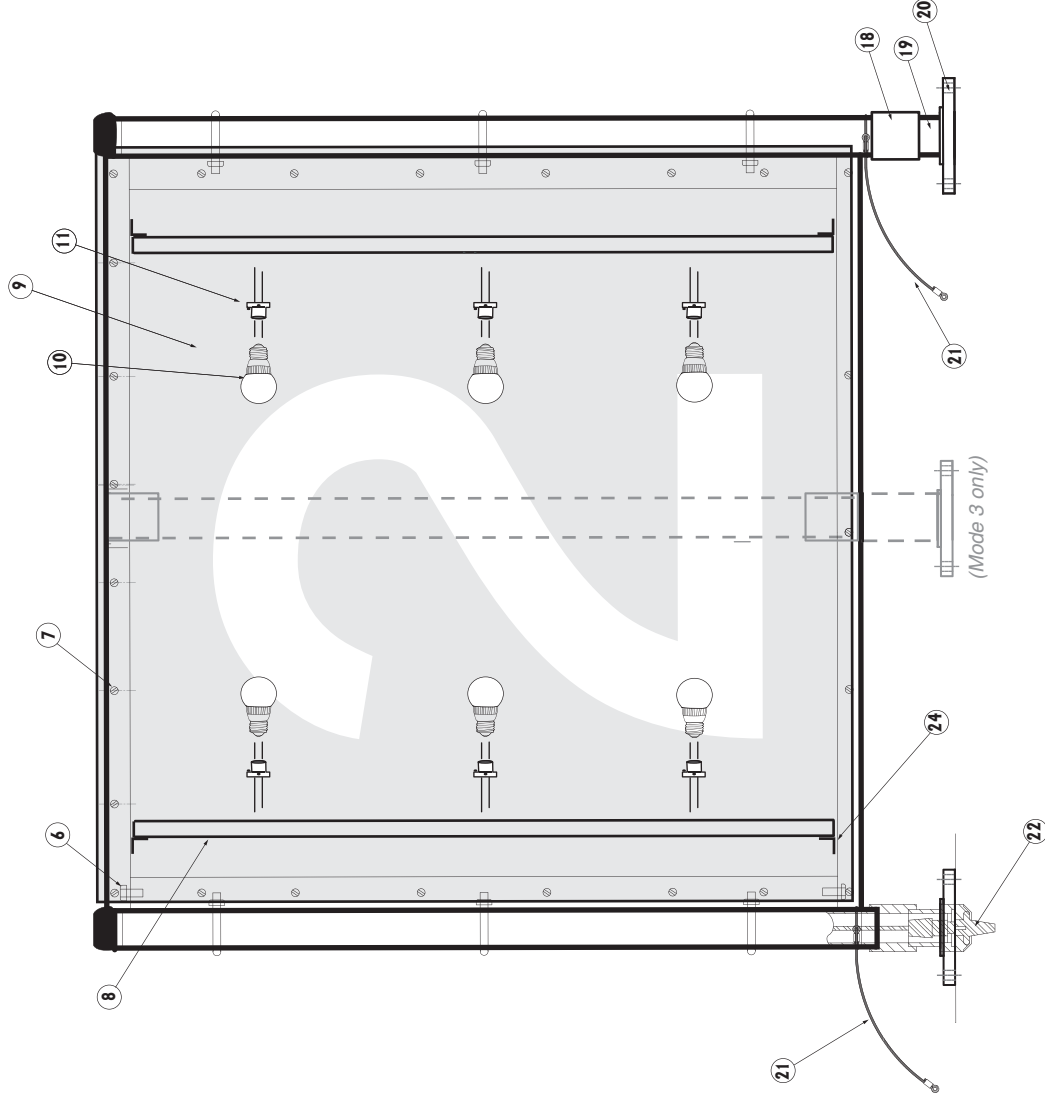
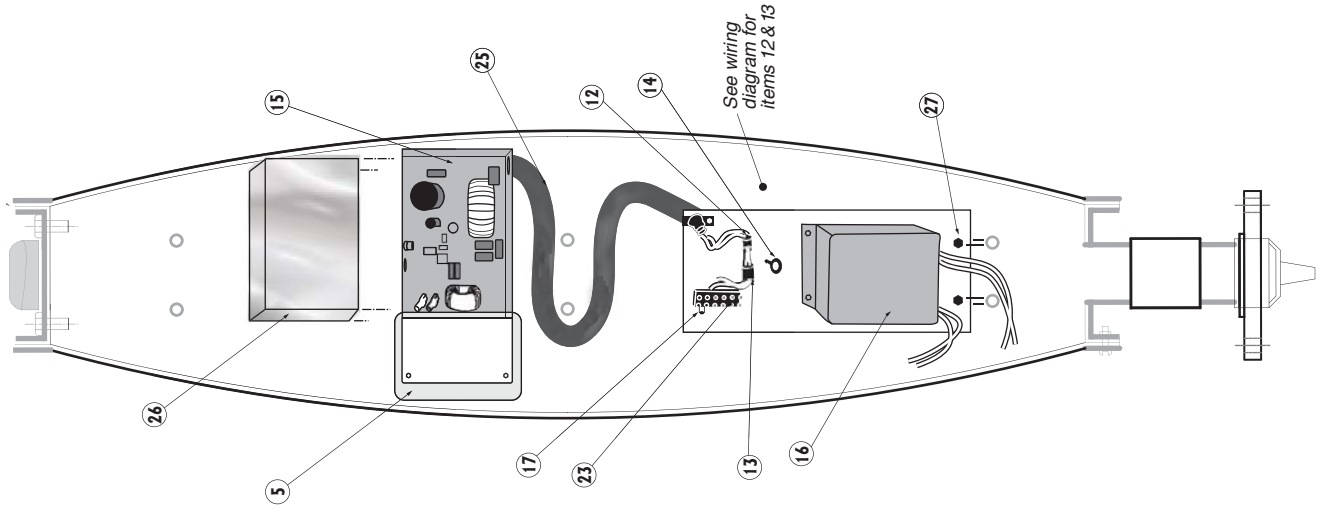
## Size 4 Distance Remaining Sign LED Lighting System



Outside View



Inside Electrical View



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Manufacturer of the First FAA Sign in 1955



## Parts & Electrical Information for Taxiway & Runway Signs LED Lighting Systems

### Certified to current FAA Advisory Circular 150/5345-44

Specification for Runway and Taxiway Signs  
*View our Certificate of Conformance*

### LUMACURVE LED System

The LUMACURVE LED system maintains constant sign brightness in accordance with FAA A/C 150-5345-44 with appreciably higher efficiency relative to traditional lighting systems, and is available in new signs or in kit form for retrofit. This system delivers a constant voltage to the 4W LED lamps at all CCR current steps. This system works equally well for high intensity (Style 3, 2.8A-6.6A), medium intensity (Style 2, 4.8A-6.6A) and Style 5 (5.5A fixed) dedicated sign circuits without internal modification\*. The lamps authorized for use in this system are Standard Signs, Inc. 4W LED lamps with medium screw base. They are available directly from Standard Signs, Inc.

### IMPORTANT!

The LUMACURVE LED lighting system is designed exclusively for FAA styles 2, 3 & 5 operation on a series circuit together with and without non-sign fixtures, such as edge lights, where the sign brightness control components are necessary to maintain constant sign brightness regardless of CCR step.

### INSTALLATION:

System lamp voltage is factory set but we recommend that one sign per CCR be spot checked with a DC voltmeter after installation. Lamp voltage is read across the lamp socket leads. If voltage varies from recommended settings (170V DC for Sizes 1, 2, 3, and 5), call and ask for technical support: 800-258-1997.

### LAMP REPLACEMENT:

When a lamp fails, the controller will sense that there is a lamp out and will turn off the remaining lamps. This feature is required per current FAA specifications. With the sign energized, press and hold the lamp reset button located on the side of the controller. Release reset button immediately when lamps are energized. The sign will relight except for the failed lamp. Replace the failed lamp(s). This completes the lamp replacement process. The controller does not need to be reset again.

### WARNING:

The use of non-OEM replacement lamps may damage electrical components as well as cause premature lamp failure. Only OEM Lumacurve 4W LED lamps will maintain FAA certifications and factory warranties.

### DIELECTRIC GREASE:

These LED lamps are powered by a DC source and are susceptible to corrosion from moisture. We recommend the use of dielectric grease on the lamp base to prevent corrosion.

\*Isolation transformer wattage requirements may vary for each application.

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Manufacturer of the First FAA Sign in 1955



## Parts & Electrical Information for Taxiway & Runway Signs LED Lighting Systems

### Jumper position Based on Regulator Type

The L-828 and L-829 Constant current regulator maintain constant amperage to the airfield circuit. The L-829 is an SCR type (silicone rectifier) commonly known as a solid state (electronic based) regulator. The L-828 is a ferro-resonant that uses transformer technology.

For SCR type L-829 regulators, a jumper (photo #1) must be installed on the LED controller (as shown in figure #3 or figure #5). For ferro-resonant type L-828 regulators controller (as shown in figure #2 or figure #4).

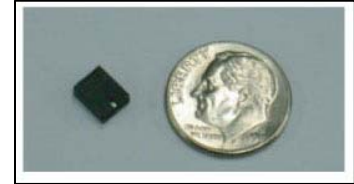
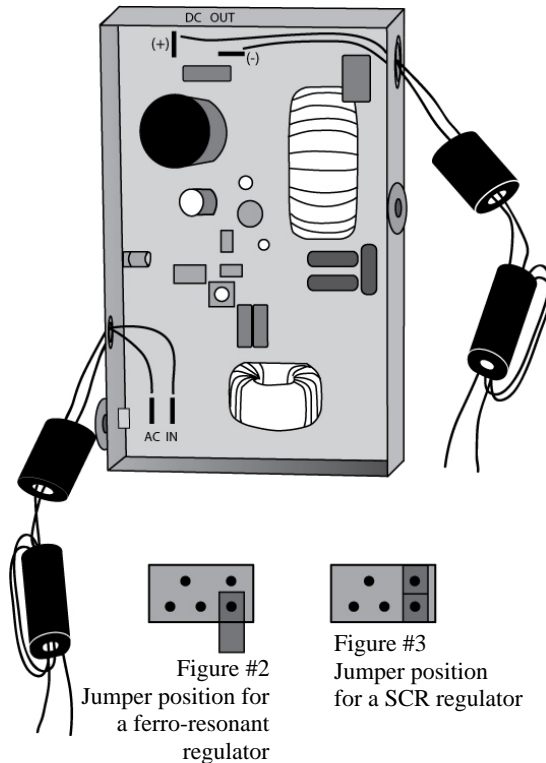


Photo #1

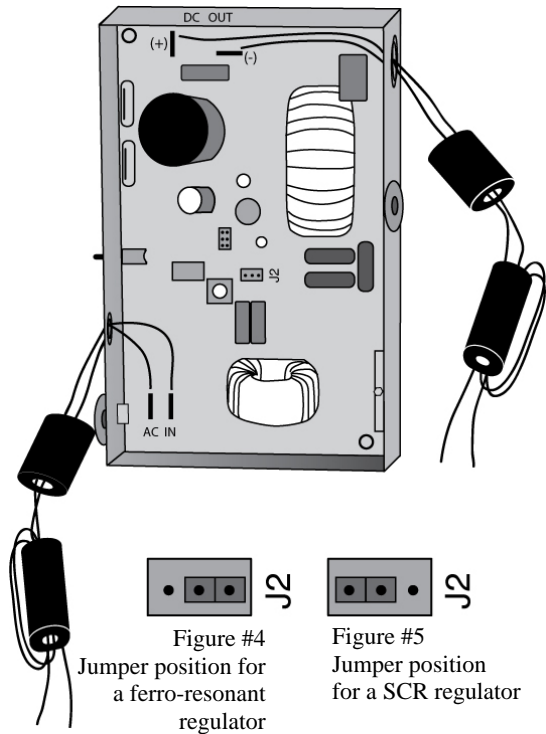
#### Instructions for installing the Jumper:

- Identify the type of Constant Current Regulator powering this sign. ("SCR" solid state or "Ferro-Resonant" type)
- Remove shield screen by loosening the fender washers.
- Locate the small black jumper. The jumper is factory installed. (figure #2 or figure #4).
- When using SCR regulator, remove jumper for ferro-resonant regulator application and reinstall over both pins as shown in photo (figure #3 or figure #5).
- Reinstall shield screen.

#### "L610 – REV. 05 or older"



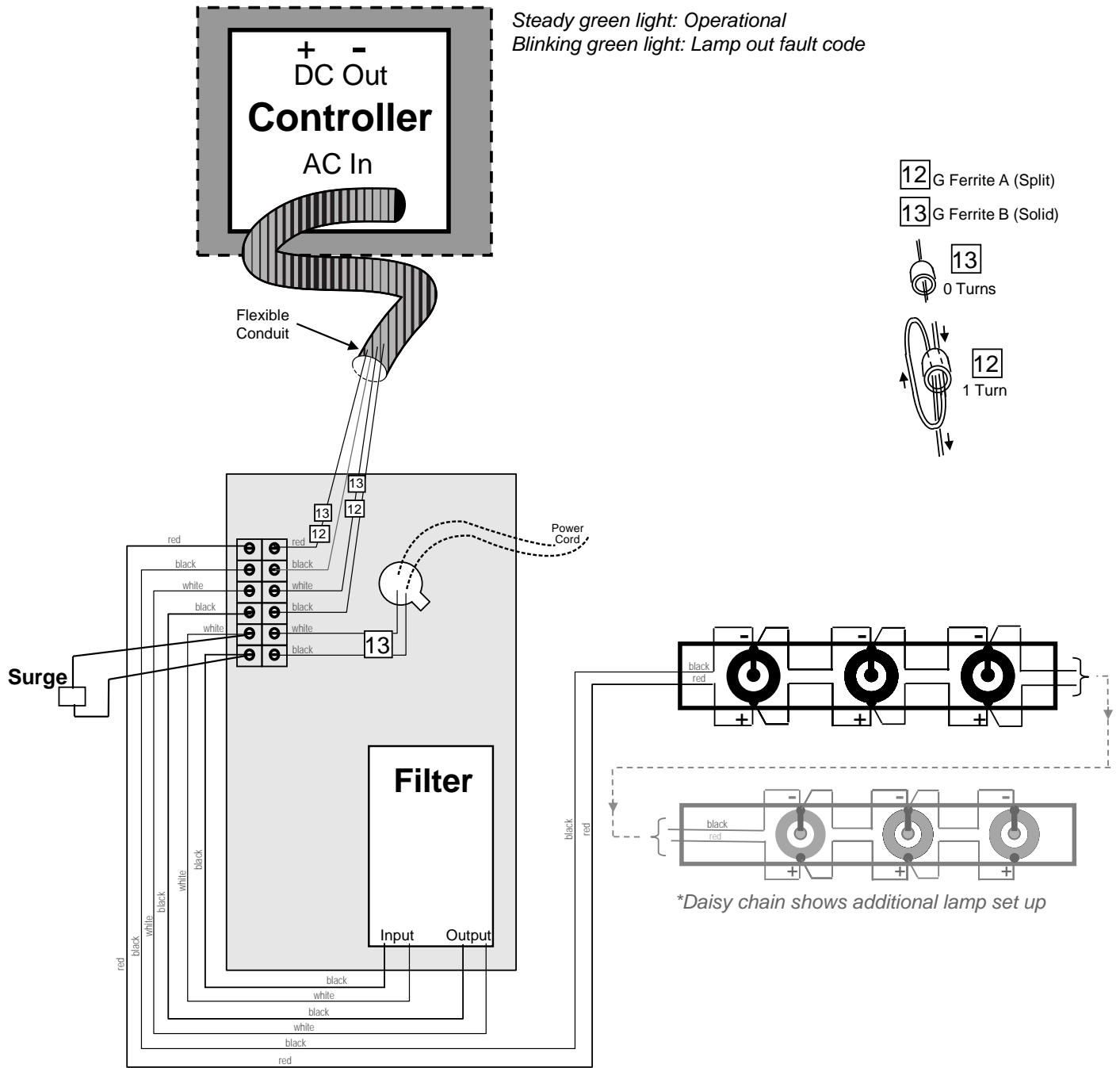
#### "L610 – REV. 06"



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# Wiring Diagram, Size 4 Distance Remaining Sign LED (Style 2, 3 & 5)



### LED VA Load, Power Factor and Isolation Transformer

Sign Size & Module Length Lamps		LED Lighting Systems									
		FAA Style 2 (4.8A-6.6A)			FAA Style 3 (2.8A-6.6A)			FAA Style 5 (5.5A)			
4	1-mod	6	4W LED Isol Xfmr	Max VA	Pwr Factr	4W LED Isol Xfmr	Max VA	Pwr Factr	4W LED Isol Xfmr	Max VA	Pwr Factr
Size 4, 1-mod		6	45W	57	0.95	100W	63	0.92	45W	47	0.96

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