

VARI-WATT DRIVERS WITH INTEGRATED EM BACKUP



JAYKAL

PROJECT NAME:

JAYKAL LED SOLUTIONS, INC.

www.jaykal.net

PROJECT NOTES:

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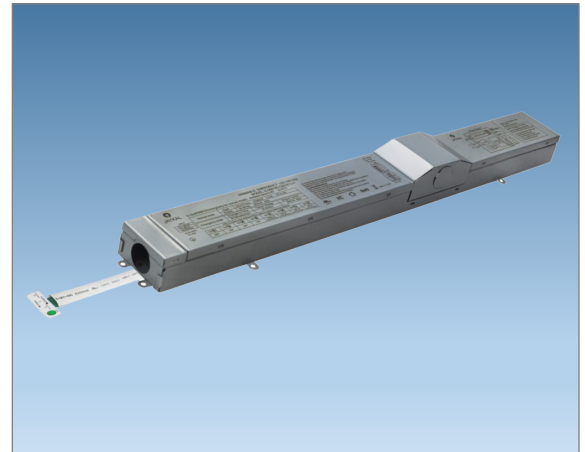
OVERVIEW

This multi-current output LED driver gives the installer the ability to field select the desired wattage for the fixture. Multiple output wattages are available using simple DIP switch settings.

The driver features integrated bi-level dimming with selections of 40%, 50%, 60% or defeated. 0-10V dimming maintains compatibility with wall dimmers and controls. The integrated emergency backup features a field serviceable battery.

FEATURES

- ◆ Bi-Level Dimming Settings: 60%, 50%, 40%, Disabled
- ◆ Output Wattage and Bi-Level Dimming Selectable by DIP Switch
- ◆ 0-10V Dimming
- ◆ Integrated Emergency Backup with Field Serviceable Battery
- ◆ Four Standard Models are Available



OPERATION

Beginning with the power off, remove the center cover to reveal the 4-position DIP Switch. Using the guide printed on the cover of the driver, select the desired output wattage by configuring the **Wattage** DIP switches to the desired setting. Once the output current settings are set the driver will maintain this constant current output. Configure the **50/50** dimming DIP switches to the desired bi-level dimming setting.

To activate the bi-level dimming function simply turn on the light switch. The fixture will illuminate to the **50/50** defined level. To raise the level to 100% (Full ON), within 10 seconds of turning on the light switch, return the switch to the OFF position and immediately back to on. The next time the light switch is turned on, the fixture will return to the bi-level preset.



RoHS 
Compliant

Revised 9/2/21

Specifications are typical values and may change without notification

efficiency. illuminated.

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GENERAL SPECIFICATIONS

Frequency	50/60Hz
Inrush Current	<25A
Harmonics (Nominal)	Fully complies with EN61000-3-2
Total Harmonic Distortion	<20% at 120V, <20% at 208V, <20% at 277V.
Input Current Protection	Fuse (Internal)
Full Range Dimming	100% - 10% of full power (standard configuration), minimum 40W Analog dimming current draw 1.5mA per fixture. Maximum number of fixtures = sensor current / 1.5mA
Dimming Options	0-10V analog dimming by relay, ambient sensor, daylight sensor or any other compatible sensor
Operating Temperature	-30°C to +50°C / -22°F to 122°F -30°C to +50°C / -22°F to 122°F
Operating Humidity	0 to 90% RH Non-Condensing 0 to 90% RH Non-Condensing
Maximum Case Temperature (Tc)	85°C / 185°F
Lifetime at Tc = 75°C / 167F	50,000 hours 50,000 hours
Remote Installation Losses	Dependent upon wire length, significantly lower than class II low voltage related losses.
EMC	FCC Title 47 Part 18 C (non-consumer): EN55015:2006, EN61547, N61000-3-2, EN61000-3-3
UL	E471865
Surge Protection	IEEE C62.41 Category C Low Between phase and neutral 6KV / 3KA Between line and ground 10KV / 1KA
Self-protection Mechanisms	In the event of a short circuit, or open circuit; If the LED fails to light; In the end of the LED's life; Input current protection by internal fuse; Advanced surge protection between phase and neutral and between line and ground; Advanced output protection against arcing or shorting to ground.

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SPECIFICATIONS TABLE				
Model JLS6810D-EMVW-1022-10-S-X-4 (10W,14W,18W,22W) (EM1)				
WATTAGE SETTINGS	22W	18W	14W	10W
INPUT VOLTAGE	100-277VAC			
INPUT CURRENT	0.096@277V	0.08A@277V	0.063@277V	0.062A@277V
POWER FACTOR	>0.9	>0.9	>0.9	>0.7
WATTAGE@60% DIMMING	14.4W	12W	9.6W	7.2W
WATTAGE@50% DIMMING	12W	10W	8W	6W
WATTAGE@40% DIMMING	9.6W	8W	6.4W	4.8W
CURRENT@60% DIMMING	0.057A@277V	0.047A@277V	0.096A@277V	0.037A@277V
CURRENT@50% DIMMING	0.047A@277V	0.039A@277V	0.031A@277V	0.031A@277V
CURRENT@40% DIMMING	0.038A@277V	0.041A@277V	0.025A@277V	0.025A@277V
CURRENT DIMMING DISABLED	0.096A@277V	0.031A@277V	0.063A@277V	0.062A@277V
EMERGENCY MODE WATTAGE	12W			
EMERGENCY MODE VOLTAGE	30-40VDC			
EMERGENCY MODE CURRENT	300mA			
DIMENSIONS				

SPECIFICATIONS TABLE				
Model JLS6810D-EMVW-1533-10-X-S-4 (15W,22W,27W,33W) (EM2)				
WATTAGE SETTINGS	33W	27W	22W	15W
INPUT VOLTAGE	100-277VAC			
INPUT CURRENT	0.163A@277V	0.120A@277V	0.096@277V	0.093A@277V
POWER FACTOR	>0.8	>0.9	>0.9	>0.7
WATTAGE@60% DIMMING	21.6W	18W	14.4W	10.8W
WATTAGE@50% DIMMING	18W	15W	12W	9W
WATTAGE@40% DIMMING	14.4W	12W	9.4W	7.2W
CURRENT@60% DIMMING	0.095A@277V	0.071A@277V	0.057A@277V	0.056A@277V
CURRENT@50% DIMMING	0.081A@277V	0.059A@277V	0.047A@277V	0.046A@277V
CURRENT@40% DIMMING	0.065A@277V	0.047A@277V	0.038A@277V	0.037A@277V
CURRENT DIMMING DISABLED	0.163A@277V	0.120A@277V	0.096A@277V	0.093A@277V
EMERGENCY MODE WATTAGE	12W			
EMERGENCY MODE VOLTAGE	30-40VDC			
EMERGENCY MODE CURRENT	300mA max			
DIMENSIONS				

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SPECIFICATIONS TABLE

Model JLS6810D-EMVW-2440-10-X-S-4 (24W,30W,36W,40W) (EM3)

WATTAGE SETTINGS	40W	36W	30W	24W
INPUT VOLTAGE	100-277VAC			
INPUT CURRENT	0.158A@277V	0.163A@277V	0.120A@277V	0.096@277V
POWER FACTOR	>0.9	>0.8	>0.9	>0.9
WATTAGE@60% DIMMING	24W	21.6W	18W	14.4W
WATTAGE@50% DIMMING	20W	18W	15W	12W
WATTAGE@40% DIMMING	16W	14.4W	12W	9.4W
CURRENT@60% DIMMING	0.095A@277V	0.095A@277V	0.071A@277V	0.057A@277V
CURRENT@50% DIMMING	0.079A@277V	0.081A@277V	0.059A@277V	0.047A@277V
CURRENT@40% DIMMING	0.063A@277V	0.065A@277V	0.047A@277V	0.038A@277V
CURRENT DIMMING DISABLED	0.158A@277V	0.163A@277V	0.120A@277V	0.096A@277V
EMERGENCY MODE WATTAGE	12W			
EMERGENCY MODE VOLTAGE	30-40VDC			
EMERGENCY MODE CURRENT	300mA max			
DIMENSIONS				

SPECIFICATIONS TABLE

Model JLS6810D-EMVW-3855-10-S-X-4 (38W,43W,48W,55W) (EM4)

WATTAGE SETTINGS	55W	48W	43W	38W
INPUT VOLTAGE	100-277VAC			
INPUT CURRENT	0.241A@277V	0.201A@277V	0.199A@277V	0.158A@277V
POWER FACTOR	>0.9	>0.9	>0.8	>0.9
WATTAGE@60% DIMMING	36W	30W	27W	24W
WATTAGE@50% DIMMING	30W	25W	22.5W	20W
WATTAGE@40% DIMMING	24W	20W	18W	16W
CURRENT@60% DIMMING	0.142A@277V	0.119A@277V	0.119A@277V	0.095A@277V
CURRENT@50% DIMMING	0.119A@277V	0.098A@277V	0.010A@277V	0.079A@277V
CURRENT@40% DIMMING	0.950A@277V	0.080A@277V	0.080A@277V	0.063A@277V
CURRENT DIMMING DISABLED	0.241A@277V	0.201A@277V	0.199A@277V	0.158A@277V
EMERGENCY MODE WATTAGE	12W			
EMERGENCY MODE VOLTAGE	30-40VDC			
EMERGENCY MODE CURRENT	300mA max			
DIMENSIONS				

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WIRING LOCATIONS AND DIP SWITCH SETTINGS

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INPUT
SWITCHED LINE
LINE IN
NEUTRAL IN
16-20AWG

GROUND

DIMMABLE EMERGENCY LED DRIVER
MODEL: JLS6810D-EMVW-1836-10-S-X-4
 0-10v/PWM Dimming(only for normal mode) Ambient temp:5-40°C tc:70°C

Normal mode	Input	100-277Vac 50/60HZ 0.4A PF>0.90		
	Output	28-40Vac 900mA Max		
Emergency mode	Emergency Time	Output Voltage		Output Current
	90 Minutes(min)	28-40Vdc		300mA Max

PIN1,2 Output power selection.PIN3,4 Switch to adjust brightness selection

ON	ON	ON	ON	ON	ON	ON	ON
36W	30W	24W	18W	Disable Bi level dimming	60% Bi leve dimming	50% Bi level dimming	40% Bi level dimming

✓ Yellow
✓ Red
✓ Green
○ Test
ON ←

4
 3
 2
 1

0-10V DIMMING
DIM+
DIM-
DC OUTPUT
LED+
LED-
16-20AWG

Do not short the dimming control wires to the loading wires
 Ne court les fils de commande de gradation aux fils de chargement
 Suitable for Damp locations/Convient aux emplacements mouilles

Caution/Attention:
 Risk of Electric shock!/Risque de choc électrique
 Disconnect power before installation/Couper l'alimentation avant installation
 Case must be grounded/Cas doit être mis à la terre
 Do not open the battery box, prohibit the replacement of the battery.
 No maintenance parts inside
 N'ouvrez pas la batterie, interdisez le remplacement de la batterie
 Aucune pièce de maintenance à l'intérieur

TEST BUTTON BEHAVIOR AND FUNCTIONS

The test button acts as a multi-function indicator. When the test button is pushed the driver will toggle between normal and back-up modes. The button also provides status indication for the presence of main power, charging, emergency and malfunction status with easily read indicator lights.

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INSTALLATION GUIDE

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. To prevent high voltage from being present on the purple and blue output leads during installation, do not connect primary AC power to the Emergency Backup. All connections to the Emergency Backup should be complete before AC power is supplied.
2. While the primary AC input voltage of 100-277V or 100-135V is present, these voltages power the AC driver. When the primary AC supply voltage is removed, the output voltage of emergency backup is 170VDC, which is equivalent to 120VAC.
3. Emergency Run Time: Min 90 minutes. This product is designed for use with LED lighting fixtures. Do not use this product in any other application.
4. Make sure all connections are in accordance with the National Electrical Code or any local regulations.
5. To reduce the risk of electric shock, disconnect both normal and auxiliary power supplies and all connections of the Emergency Backup before servicing.
6. A constant AC power source (100-277VAC/120-250VAC) is required to provide battery charging current.
7. Do not install near gas or electric heaters.
8. This product is for use with indoor or damp locations where the ambient temperature range is (0°C to 50°C). It is not suitable for wet or hazardous locations.
9. This is a sealed unit. The integral battery is not replaceable. Replace the entire unit when necessary.
10. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
11. Servicing should be performed by qualified personnel.
12. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
13. Do not use this equipment for any other purpose than its intended use.

INPUT	MODEL	OUTPUT WATTAGE	BACKUP WATTAGE
100-277VAC 50/60hz	JLS6810D-EMVW-1022	(10W/14W/18W/22W)	12W
	JLS6810D-EMVW-1533	(15W/22W/27W/33W)	
	JLS6810D-EMVW-2440	(24W/30W/36W/40W)	
	JLS6810D-EMVW-4060	(38W/43W/48W/55W)	

NOTE: THE EMVW DRIVER WILL REPLACE THE EXISTING DRIVER

STEP 1: DISCONNECT AC POWER FROM THE FIXTURE

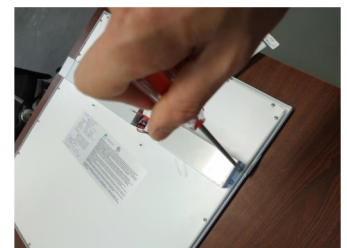
A flat panel fixture procedure is shown for illustration purposes.

1. Disconnect all power sources from lighting fixture and ensure they are locked out during installation or maintenance.
2. Disconnect the AC power leads from the existing driver.
3. Remove the existing LED driver.
4. Select a suitable location for the Emergency Backup and orient the unit so that the output terminals can connect to the DC input leads of the fixtures LED board(s). (See **Picture 1**) Multiple options are provided for wire entry points.

NOTE: The test ribbon exists from the underside of the EMVW driver. The ribbon may be oriented parallel or perpendicular to the metal housing. Slots are provided to orient the cable in the desired direction prior to securing the EMVW to the fixture. The cable must remain flat when exiting the housing to prevent damage.



Picture 1.



Picture 2.



CAUTION: Before installing, make certain the power is shut off and Emergency Backup unit is disconnected.

NOTE: Make sure that the necessary branch circuit wiring is available.

An unswitched source of power is required. The unswitched and switched power source must be fed from the same branch circuit.

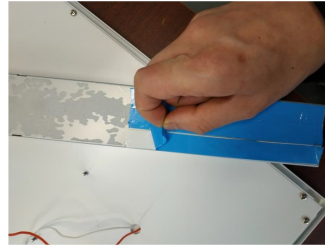
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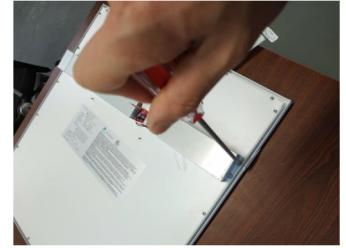
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INSTALLATION GUIDE

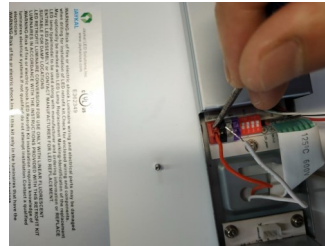
5. Peel the blue film from the underside of the EMVW housing and press it firmly into place. Secure with Tek screws. **(See Picture 3,4)**
6. Connect the LED DC input connections to the EMVW. Red wire to LED+, white wire to LED-. **(See Picture 5)**
7. Connect the battery pack. **(See Picture 6)**
8. Remove the film on the back of the test button. **(See Picture 7)**
9. Position the TEST button in an appropriate position. **(See Picture 8)**
10. Backup driver installation is complete. **(See Picture 9)**
11. Install fixture conforming to manufacturers recommendations.



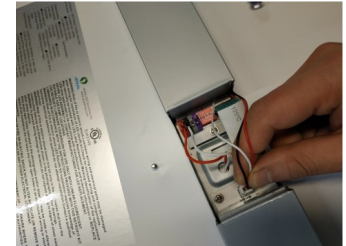
Picture 3.



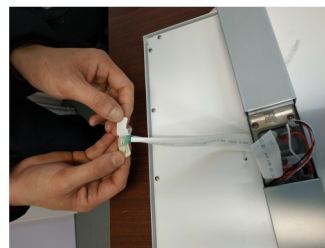
Picture 4.



Picture 5.



Picture 6.



Picture 7.



Picture 8.



Picture 9.

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