

# VARI-WATT DRIVERS WITH INTEGRATED EM BACKUP



**JAYKAL**

PROJECT NAME:

**JAYKAL LED SOLUTIONS, INC.**

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PROJECT NOTES:

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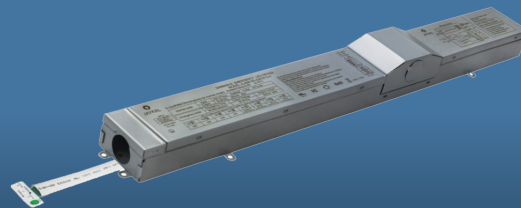
## PRODUCT DESCRIPTION

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



## 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 10/7/24

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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
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-1224-10-S-X-4 (12W,16W,20W,24W) (EM1)

WATTAGE SETTINGS	24W	20W	16W	12W
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-1836-10-X-S-4 (18W,24W,30W,36W) (EM2)

WATTAGE SETTINGS	36W	30W	24W	18W
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-4060-10-S-X-4 (40W,45W,50W,60W) (EM4)

WATTAGE SETTINGS	60W	50W	45W	40W
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

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	90 Minutes(min)		Output Voltage	28-40Vdc
				Output Current	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

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/C convient aux emplacements mouilles

**Caution/Attention:**  
 Risk of Electric shock/Risque de choc electrique  
 Disconnect power before installation/Couper l'alimentation avant installation  
 Case must be grounded/Cas doit etre mis a 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 piece de maintenance a interieur

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

## TEST BUTTON BEHAVIOR AND LED 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.



1. Test: Toggles between Normal and Test Operation
2. Main Power: Illuminates green when constant main power is present for charging.
3. Charging Status: Will flash red when charging, go out when fully charged and stay solid when in test mode.
4. Malfunction: Amber LED will illuminate when battery is completely discharged, battery has failed, battery is disconnected or charging circuit has failed. It is normal for the malfunction indicator to light on initial installation. This indicates the battery is completely discharged. The malfunction light will extinguish after the battery has acquired some charge. Normally 20-30 minutes.

**Notes: When initially installing or servicing the driver always have the DC output connected to the LEDs. If you power this unit up without first connecting the LEDs, permanent damage can occur to the Emergency unit.**

## TROUBLE SHOOTING TIPS

1. Confirm that there is a fulltime powered circuit available for charging the battery.
2. Confirm the wall switch is NOT interrupting the battery charging circuit feeding the EMVW.
3. The lighting circuit should be a separate circuit from the EM backup circuit.
4. Test that the neutral wire is not missing its return path to the panel.

**If you encounter issues with the backups performance. Please verify the points listed above.**

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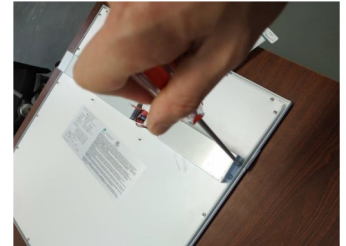


### INSTALLATION GUIDE

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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