

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 7/15/25

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 num- |
| Dimming Options | 0-10V analog dimming by relay, ambient sensor, daylight sensor or any other compatible sensor |
| Operating Temperature | 5°C to +50°C / 41°F to 122°F |
| Operating Humidity | 0 to 90% RH Non-Condensing 0 to 90% RH Non-Condensing |
| Maximum Case Temperature (Tc) | 70°C / 158°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 Line and Neutral 1.8KV Between Line and Ground 1.8KV |
| 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 | 0.048A@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 | 0.048A@277V | 0.039A@277V | 0.029A@277V |
| CURRENT@50% DIMMING | 0.047A@277V | 0.04A@277V | 0.032A@277V | 0.024A@277V |
| CURRENT@40% DIMMING | 0.038A@277V | 0.032A@277V | 0.026A@277V | 0.019A@277V |
| CURRENT DIMMING DISABLED | 0.096A@277V | 0.08A@277V | 0.063A@277V | 0.048A@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 | 0.144A@277V | 0.120A@277V | 0.096@277V | 0.072A@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 | 9.6W | 7.2W |
| CURRENT@60% DIMMING | 0.086A@277V | 0.072A@277V | 0.058A@277V | 0.043A@277V |
| CURRENT@50% DIMMING | 0.072A@277V | 0.06A@277V | 0.048A@277V | 0.036A@277V |
| CURRENT@40% DIMMING | 0.058A@277V | 0.048A@277V | 0.039A@277V | 0.029A@277V |
| CURRENT DIMMING DISABLED | 0.144A@277V | 0.120A@277V | 0.096A@277V | 0.072A@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 | 0.16A@277V | 0.144A@277V | 0.120A@277V | 0.096A@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 | 0.096A@277V | 0.087A@277V | 0.072A@277V | 0.058A@277V |
| CURRENT@50% DIMMING | 0.08A@277V | 0.072A@277V | 0.06A@277V | 0.048A@277V |
| CURRENT@40% DIMMING | 0.064A@277V | 0.058A@277V | 0.048A@277V | 0.038A@277V |
| CURRENT DIMMING DISABLED | 0.16A@277V | 0.144A@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 | 0.181A@277V | 0.16A@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 | 0.144A@277V | 0.12A@277V | 0.108A@277V | 0.096A@277V |
| CURRENT@50% DIMMING | 0.12A@277V | 0.1A@277V | 0.09A@277V | 0.08A@277V |
| CURRENT@40% DIMMING | 0.096A@277V | 0.080A@277V | 0.072A@277V | 0.064A@277V |
| CURRENT DIMMING DISABLED | 0.241A@277V | 0.201A@277V | 0.181A@277V | 0.16A@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

JAYKAL 0-10v/PWM Dimming(only for normal mode) Ambient temp:5-50°C tc:70°C

INPUT SWITCHED LINE LINE IN NEUTRAL IN 16-20AWG GROUND

DIMMABLE EMERGENCY LED DRIVER
MODEL:JLS6810D-EMVW-1836-10-S-X-4
 Ambient temp:5-50°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 |

PIIN1,2 Output power selection,PIIN3,4 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/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- LED+ LED- 16-20AWG

DC OUTPUT

Yellow
 Red
 Green
 Test

TEST BUTTON BEHAVIOR AND TROUBLE SHOOTING 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.

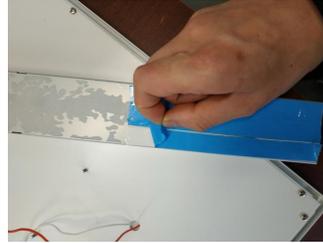
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INSTALLATION GUIDE

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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