

KVG-DWJ SERIES 600W

DIMMABLE LED DRIVER SPECIFICATIONS



Note: The information shown on the product label in the image may not exactly represent the actual product specifications.



Job Information

Project Name	
Type	
Location	
Quantity	
Date	

DESCRIPTION

KVG-DWJ-600W is a 600W constant-voltage dimmable LED driver designed for professional LED lighting and magnetic track lighting systems. It features flicker-free and noise-free dimming for smooth, silent operation, along with Hiccup Mode for enhanced protection against short circuit, overload, and over-temperature conditions. Operating from 110–277VAC, it is available with 24V, 36V or 48VDC output. It supports forward-phase, MLV, reverse-phase, ELV and TRIAC dimming, as well as 0–10V, 1–10V, 10V PWM and potentiometer control. Additional features include active PFC, PWM output, and integrated short-circuit, overload, and over-temperature protection.

PERFORMANCE

SERIES NAME	KVG-DWJ-600W		
OUTPUT	Constant Voltage		
INPUT VOLTAGE RANGE	110-277VAC, 50/60 HZ		
PFC DESIGN	Built-in Active PFC Function		
EFFICACY	Up to 93%		
PROTECTIONS	Short Circuit / Over Load / Over Temperature		
HEAT DISSIPATION	Cooling by Free Air Convection		
ENVIRONMENT	Dry, Damp & Wet Location		
DESIGN FEATURES	Output mode selection: Pulse-Width Modulation (PWM) & Voltage Reduce (VR) mode can be switched.		
DIMMING FUNCTION (5 in 1)	High-frequency PWM Dimmable LED Driver, 20 kHz, Providing Flicker-free, Noise-free Dimming Performance.		
	Phase-cut Dimming: Compatible with Forward Phase, MLV and Reverse Phase, ELV TRIAC Dimmers.		
	0-10V Dimming: 0-10V/1-10V/Potentiometer/10V PWM		
MIN LOAD	Min load is 15%		
DIMMING RANGE	PWM:0-100% VR: 24V: 0~24V 36V: 0~36V 48V: 0~48V		
DIMMING DEPTH	PWM:0.1% VR: 24V: 14V±0.5V 36V: 21V±1V 48V: 28V±1V		
APPLICATIONS	Suitable for LED Lighting / Magnetic Track Lighting Systems		
OPERATION TEMPERATURE	-40 TO +40°C (-40°F TO +104°F)		
CERTIFICATIONS	cULus Listed		
WARRANTY	5 Years		



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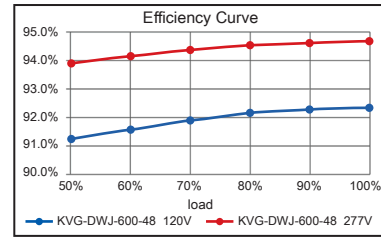
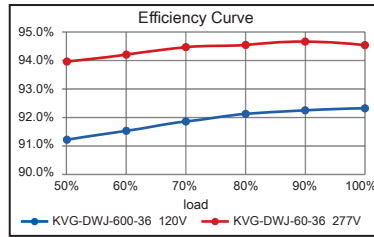
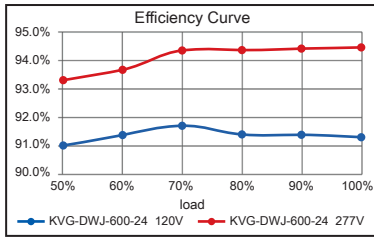
SPECIFICATION

MODEL NAME		KVG-DWJ-600-24	KVG-DWJ-600-36	KVG-DWJ-600-48
OUTPUT	DC Voltage	24V	36V	48V
	Voltage Tolerance	±1.5%	±1%	±1V
	Voltage Regulation	≤0.5%	≤0.5%	≤0.5%
	Rated Current	25A	16.67A	12.5A
	Rated Power	600W		
	Load Regulation	±1%		
	Output Volt Adjustment	24-25.5V 	36-37.5V 	48-49.5V 
Output Mode Selection		The DIP switch at the "ON" position represents the PWM (Pulse-Width Modulation) mode, and at the "1" position represents the VR (Modulation of DC Voltage) mode. Switching the output mode requires the power to be cut off for 3 seconds and then powered on again for the mode switching to take effect.		
INPUT	Voltage Range	110-277VAC		
	Frequency Range	50/60Hz		
	Power Factor @ full load	>0.95		
	THD(Typ.) @ full load	<20%@120VAC & 277VAC		
	Efficiency(Typ.) @ full load	90.5%@120VAC 93%@277VAC	90.5%@120VAC 93%@277VAC	90.5%@120VAC ; 93%@277VAC
	AC Current (Max.)	5.97A		
	Inrush Current (Typ.)	43A,810us@50%Ipeak110VAC 76A,148us@50%Ipeak277VAC		
	Leakage Current	<0.5mA		
PROTECTION	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed.		
	Over Load	105%~120% Hiccup mode, recovers automatically after fault condition is removed.		
	Over Temperature	100°C±10°C shut down o/p voltage, automatically recover after cooling.		
ENVIRONMENT	Working TEMP. (Ta)	-40°F TO +104°F (-40°C TO +40°C) (see below derating curve)		
	Working Humidity	20 - 95%RH non-condensing		
	Storage TEM.,Humidity	-40°F TO +176°F (-40°C TO +80°C),10 - 95% RH non-condensing		
	TEMP. Coefficient	±0.03%/°C(0 - 50°C)		
	Vibration	10 ~ 500Hz, 5G 12 minutes/cycle, X Y Z axis 72 minutes each		
SAFETY & EMC	Safety Standards	UL8750; CAN/CSA-C22.2 No.250.13		
	Withstand Voltage	I/P-O/P:1.88KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC		
	Isolation Resistance	I/P-O/P: 100MΩ / 500VDC / 25°C / 70% RH		
	Surge Immunity Test	AC Power Line: Differential Mode 2KV,Common Mode 4KV		
	EMC Immunity	FCC/ICES do not request this test.		
	EMC Emission	FCC Part 15 Subpart B; ANSI C63.4a-2017; ICES-005 Issue 5		
OTHERS	Net Weight	2.58KG		
	Dimension	L11.02"xW5.52"xH1.91" (280*140.2*48.5mm)		
	Packing	L13.46"xW11.22"xH6.69" (342*285*170mm) 5pcs/CTN		
CERTIFICATE		UL / FCC /ICES-005 / Class P / SELV / ROHS / REACH		
NOTES		1. All parameters NOT specially mentioned are measured at 120VAC input, rated load and 77°F (25°C) of ambient temperature. 2. Under low input voltage, derating output is required to ensure a long life. 3. Default states: The output mode is PWM mode. The dimming curve is a gamma2.2 curve. 4. Regarding LED driver load types where the driver meets the harmonic emissions requirements of ANSI C82.77-10.		

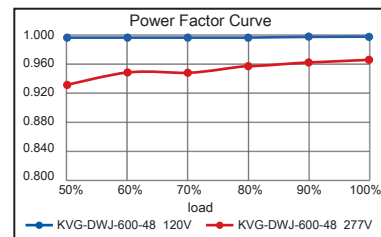
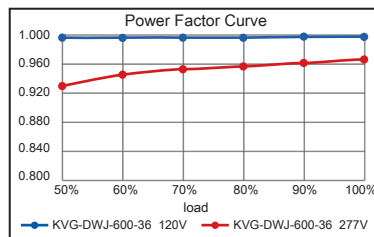
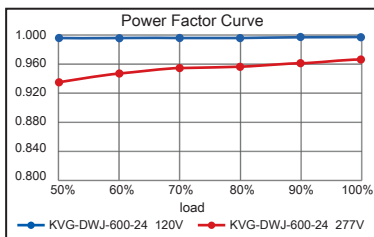
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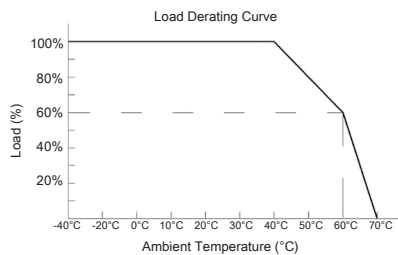
EFFICIENCY CURVE (EFFICIENCY VS OUTPUT LOAD)



POWER FACTOR CURVE (POWER FACTOR VS OUTPUT LOAD)



DERATING CURVE (OUTPUT LOAD VS TEMP.)

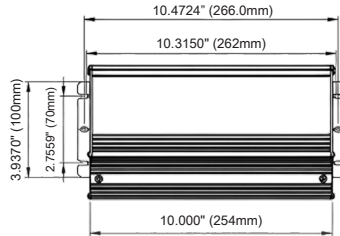


1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. Please note that the rise in temperature of LED fixtures over a long period of time will cause their power to rise. Therefore, we recommend the power supply to reserve a certain amount of load to avoid overloading.

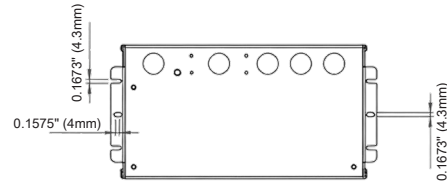
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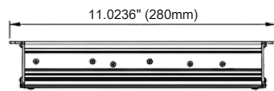
MECHANICAL SPECIFICATION (24V, 36V & 48V VERSION)



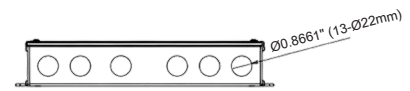
Top View



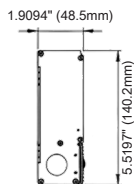
Bottom View



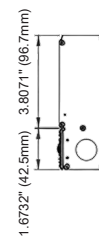
Rear View



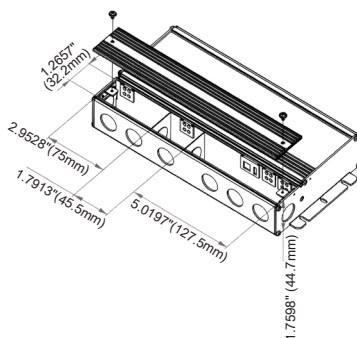
Front View



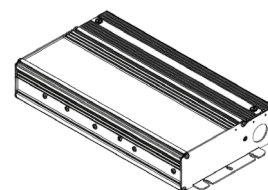
Left Side Views



Right Side Views



Wiring/Open View



Isometric View

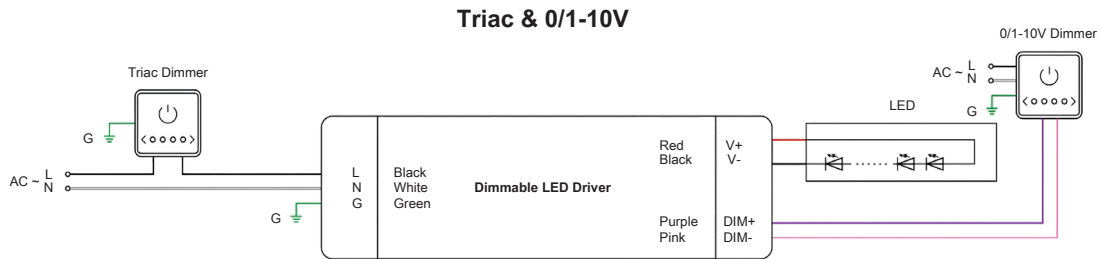
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DIMMING OPERATION AND CONNECTING DIAGRAM

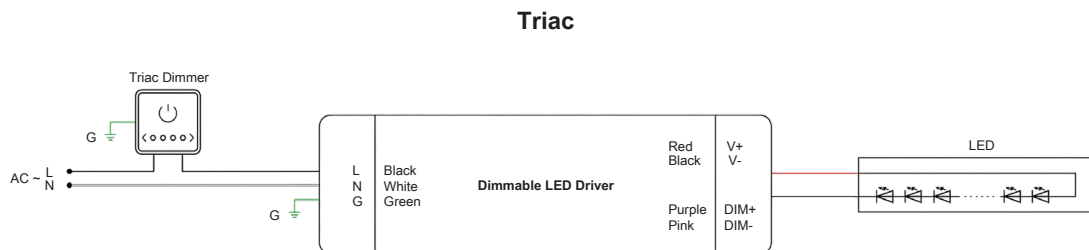
• Using two ways of dimming at the same time

You must be assured that LED lighting is up to the max. Brightness then you could operate with the other dimming;



• Using one dimming ---TRIAC/Phase cut dimming

1. The Pulse-Width Modulation (PWM) of output voltage can be adjusted through input terminal of the AC phase line(L) by connection a phase /Triac dimmer or lighting system.
2. Working with Forward phase, MLV and Reverse phase , ELV, TRIAC dimmers or light system.
3. Min. loading is about 10%.
4. Please try to use dimmers with power at least 1.5 times as the output power of the driver.



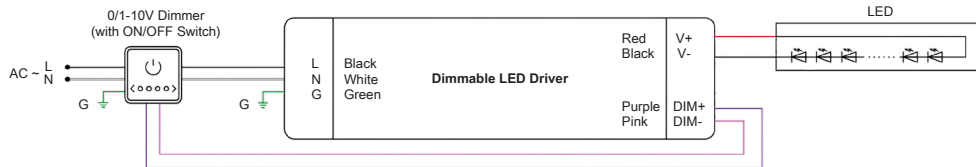
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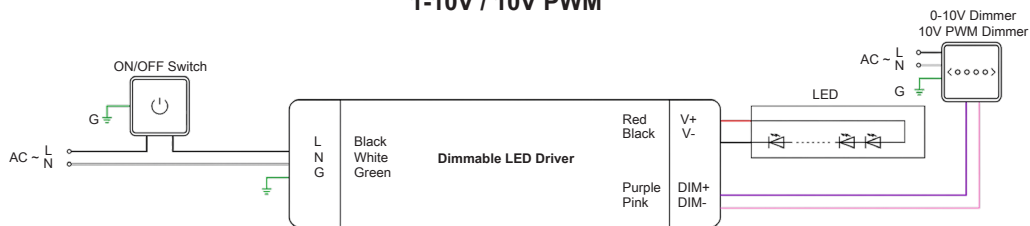
DIMMING OPERATION AND CONNECTING DIAGRAM

- Using one dimming ---0-10V/ 1-10V/ 10V PWM/ Potentiometer dimming

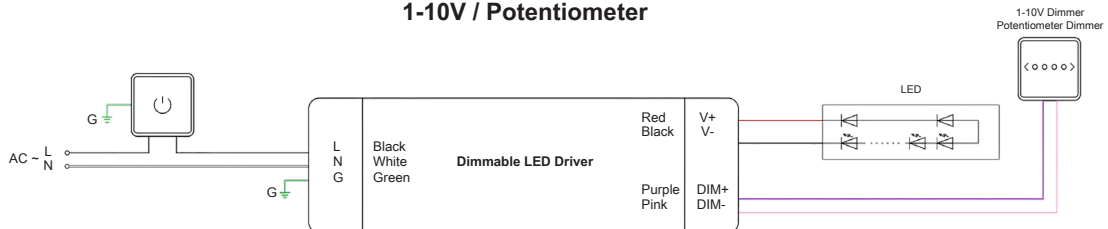
0/1-10V



1-10V / 10V PWM



1-10V / Potentiometer



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WIRING SPECIFICATION (AMERICAN WIRE GAUGE)

JM600	
Input Wire	Black(L) White(N) Green(G) (3*18AWG)
Output Wire	24V&36V: Red(V+) Black(V-) (2*14AWG)*2 48V: Red(V+) Black(V-) (2*14AWG)
Dimming Wire	Purple(DIM+) Pink(DIM-) (2*18AWG)

Warm tips:

- 1.Recommended Max. Carrying Current (A) = wire diameter(mm²) x 10A/mm².
For example: 1mm² output cable, Recommended Max. Carrying Current (A) = 1mm² x 10A/mm²=10A.
- 2.Any other requests for, we can customized.

INSTRUCTIONS

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver Cannot work normally, don't maintain privately.