

KVG-DWJ SERIES 500W

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-500W is a 500W 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 12V, 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-500W
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
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
DIMMING RANGE	0-100% Dimming Depth 0.1%
APPLICATIONS	Suitable for LED Lighting / Magnetic Track Lighting Systems
OPERATION TEMPERATURE	-40 TO +40°C (-40F TO +104F)
CERTIFICATIONS	cULus Listed
WARRANTY	5 Years

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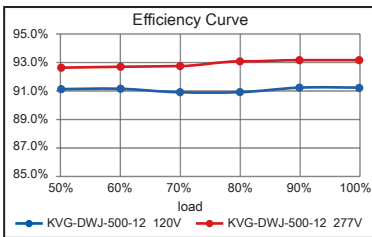
SPECIFICATION

MODEL NAME		KVG-DWJ-500-12	KVG-DWJ-500-24	KVG-DWJ-500-36	KVG-DWJ-500-48
OUTPUT	DC Voltage	12V	24V	36V	48V
	Voltage Tolerance	±0.5V			
	Voltage Regulation	≤0.5%			
	Rated Current	41.67A	20.83A	13.89A	10.42A
	Rated Power	500W			
	Load Regulation	≤1%			
INPUT	Voltage Range	110-277VAC			
	Frequency Range	50/60Hz			
	Power Factor @ full load	>0.95			
	THD(Typ.) @ full load	≤10%@120VAC			
	Efficiency(Typ.) @ full load	90%@120VAC 92.5%@277VAC	90.2%@120VAC 93%@277VAC	90.2%@120VAC 93%@277VAC	90.5%@120VAC 93%@277VAC
	AC Current (Max.)	5.03A			
	Inrush Current (Typ.)(50%)	52A,810us@50%110VAC 76A,148us@50%277VAC			
	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	Shell surface temp.100°C±10°C shut down o/p voltage, automatically recover after drops.			
ENVIRONMENT	Working TEMP. (Ta)	-40°F TO +104°F (-40°C TO +40°C) (see below derating curve)			
	Case Temperature (Tc)	+194°F (+90°C)			
	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 12min./1 cycle, period for 72min. each along X,Y,Z axes			
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			
	EMC Immunity	FCC/ICES do not request this test.			
	EMC Emission	FCC 47 CFR Part 15 ,Subpart B			
OTHERS	Net Weight	2.8KG			
	Dimension	L11.02"xW5.52"xH1.976" (280*140.2*50.2mm)			
	Packing	L13.46"xW11.22"xH6.69" (342*285*170mm) 5pcs/CTN			
CERTIFICATE		UL / cUL / FCC / ICES-005 / ClassP / TYPE HL / 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. Tolerance: includes set up tolerance and load regulation .			

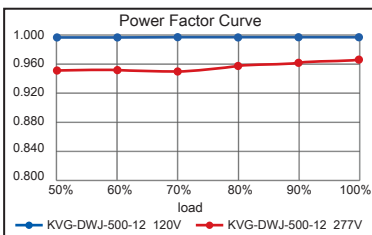
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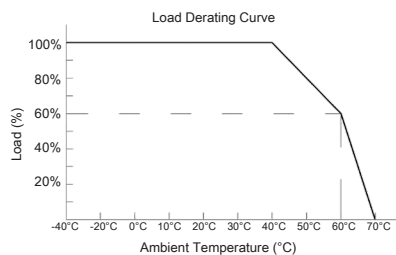
EFFICIENCY CURVE (EFFICIENCY VS OUTPUT LOAD)



POWER FACTOR CURVE (POWER FACTOR VS OUTPUT LOAD)



DERATING CURVE (OUTPUT LOAD VS TEMP.)

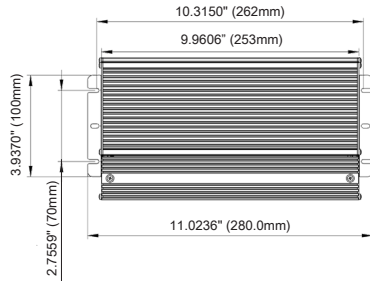


1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. Please note that the rise in temperature of LED fixtures over a long period of time will cause their power to rise. Therefore, we recommend the power supply to reserve a certain amount of load to avoid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

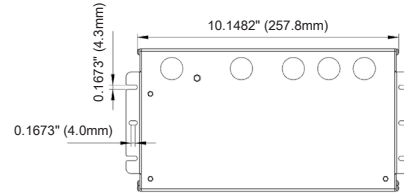
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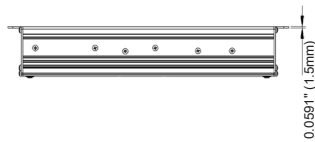
MECHANICAL SPECIFICATION (12V, 24V, 36V & 48V VERSION)



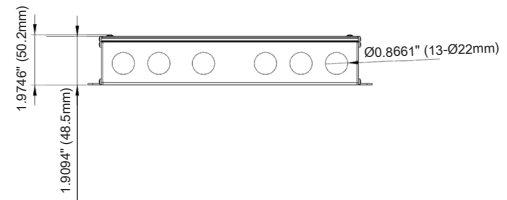
Top View



Bottom View



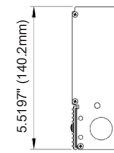
Rear View



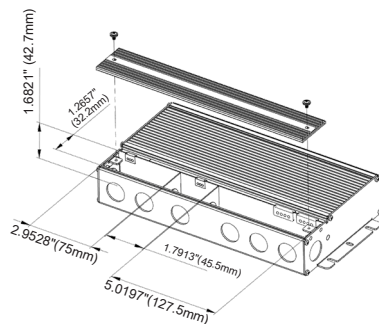
Front View



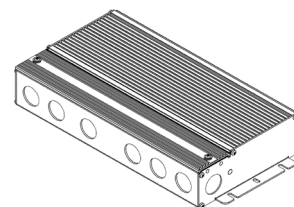
Left Side Views



Right Side Views



Open View



Isometric View

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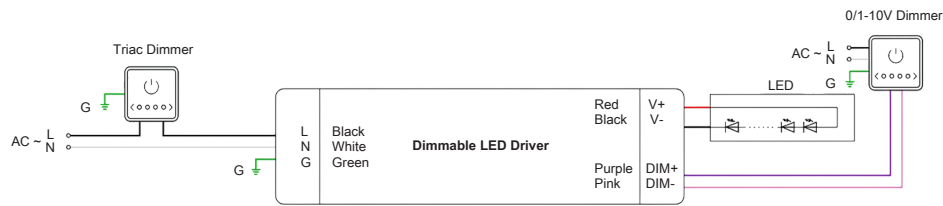
DIMMABLE LED DRIVER SPECIFICATIONS

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;

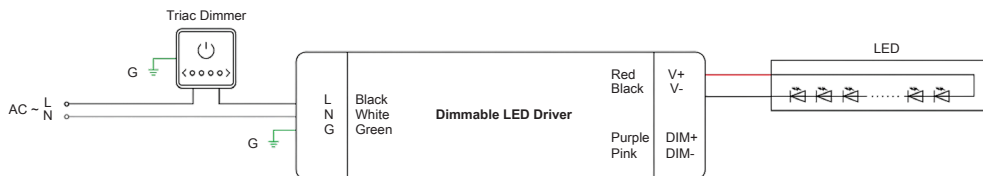
Triac & 0/1-10V



• 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.

Triac (KVC series)



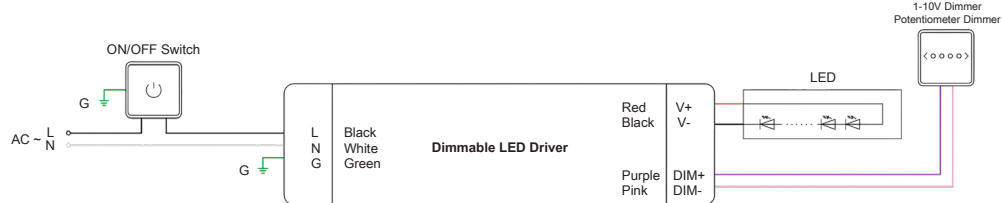
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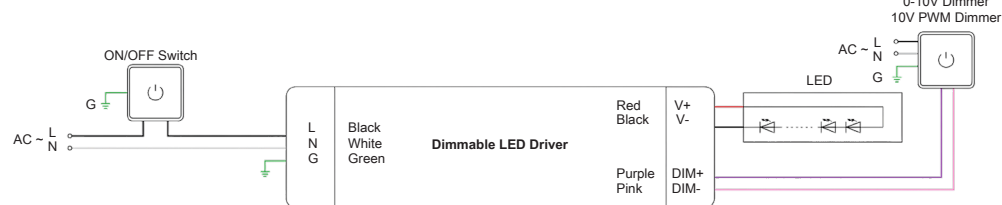
DIMMING OPERATION AND CONNECTING DIAGRAM

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

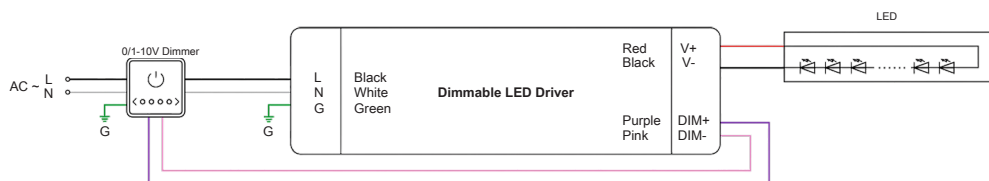
1-10V / Potentiometer



1-10V / 10V PWM



0/1-10V



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WIRING SPECIFICATION (AMERICAN WIRE GAUGE)

JM600	
Input Wire	Black(L) White(N) Green(G) (3*18AWG)
Output Wire(12V)	Red(V+) Black(V-) (2*14AWG)*3
Output Wire(24V)	Red(V+) Black(V-) (2*14AWG)*2
Output wire(36V&48V)	Red(V+) Black(V-) (2*14AWG)
Dimming Wire	Purple(DIM+) Pink(DIM-) (2*18AWG)
Remarks: Please make sure you connect these correctly otherwise your product will not function correctly and could be damaged.	

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.