

# Din Rail 5 in 1 (Triac/0-10V/1-10V/Potentiometer/10V PWM) Dimmable LED driver

### Features:

- ·Output constant voltage
- ·Input voltage range: 100-277VAC
- ·UL/cUL listed, Class 2, Class P, FCC approval
- ·Built-in PFC function / Efficiency > 83% / PF> 0.99
- ·Dimming range: 0~100% / load:10~100%
- ·Protections:short circuit/over voltage/over heat
- ·IP20 design for indoor dry or damp environment installations
- ·Cooling by free air convection.
- ·Dimming mode:1) forward phase /leading edge ,MLV and Reverse phase /trailing edge ,ELV,TRIAC dimmers..
- 2) 0-10V/1-10V/Potentiometer/10V PWM 4 in 1 available
- ·Full protection plastic housing, for dry, damp location only.
- $\cdot Strong \ compatibility, \ flicker-free \ dimming$
- ·Dimming range: 0~100%
- $\cdot \textsc{Suitable}$  for LED lighting and moving sign applications
- ·Compliance to worldwide safety regulations for lighting
- ·7 years warranty



12VDC, 24VDC / 60W, 100W available

Specification:	
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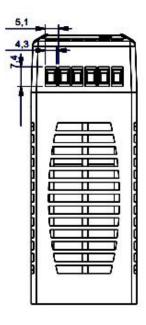
		CIP-012-060TDDR	CIP-024-060TDDR
model		CIF-012-0601DDR	CIF-024-0601DDK
Output	DC Voltage	12VDC	24VDC
	Voltage Accuracy	±5%	±5%
	Rated current	5.0Amp	2.5Amp
	Rated power	60W	60W
	Voltage Regulation	±0.5%	
	Load Regulation	±1%	
Input	Voltage Range	100-2	277 VAC
	Frequency Range	47~63HZ	
	Power Factor (Typ.)	0.98@120VAC ,0.95@277VAC	0.98@120VAC ,0.95@277VAC
	THD(Typ. ) @ full load	<20%@120	VAC & 277VAC
	Full Load Efficiency	83%@120VAC, 85%@277VAC	83%@120VAC, 84%@277VAC
	AC Current (Typ.)	0.9A	
	Inrush Current (Typ.)	14A, 50%, 780us @120VAC;	15A, 50% , 660us @277VAC
	Leakage current	<0.5mA	
Protection	Short Circuit	shut down o/p voltage, re-power	r on to recover after fault condition
		removed	
	Over Loading	≤120% Hiccup mode,recovers automatically after fault condition i	
		removed	
	Over temperature	100℃±10℃ shut down o/p voltage, automatically recover after	
Environment	Working TEMP.	-40∼+60°C	
	Working Humidity	20~90%RH,non-condensing	

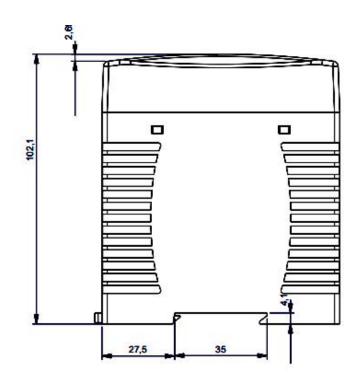


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	Storage TEM.,Humidity	-40∼+80℃,10~95%RH		
	TEMP.coefficient	±0.03%/°C (0~50°C)		
Vibration		10 $\sim$ 500Hz, 2G 10min./1 cycle, period for 60min.		
		each along X,Y,Z axes		
Safety&EMC	Safety standards	UL8750+UL1310 , CAN/CSA-C22.2 No.250.13		
	Withstand voltage	I/P-O/P:1.88KVac		
	Isolation resistance	I/P-O/P:100MΩ/500VDC/25°C/70%RH		
	EMC EMISSION	FCC 47 CFR Part 15 ,Subpart B		
Others	Weight	0.3Kg		
	Size	40*90*100mm(L*W*H)		
	packing	50PCS/CTN, carton size:330*330*130mm		
	1. All parameters NOT specially mentioned are measured at 110VAC, 277VAC input,			
Notes	Rated load and 25°C of ambient temperature.			
	2. Tolerance:includes set us tolerance,line regulation and load regulation .			
	3. The power supply is considered as a component that will be operated in combination with			
	final Equipment. Since EMC performance will be affected by the complete installation, the			
	final equipment manufactures must be-qualify EMC Directive on the complete installatior			
	again.			

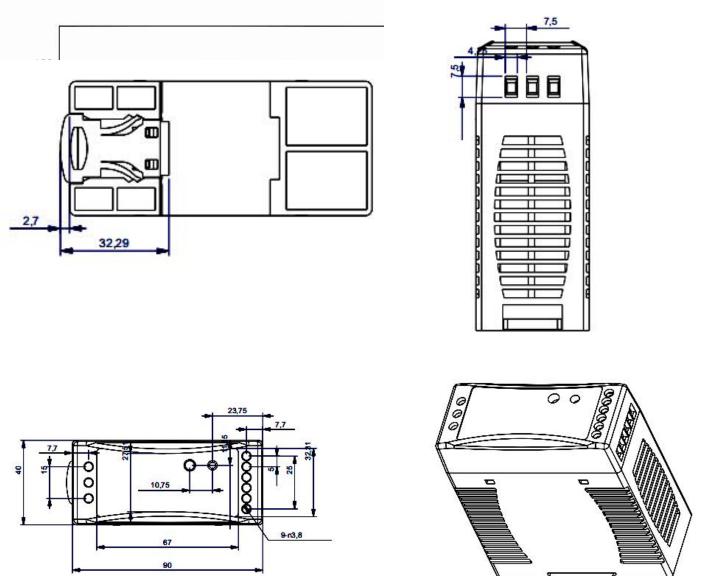
# Mechanical Specification







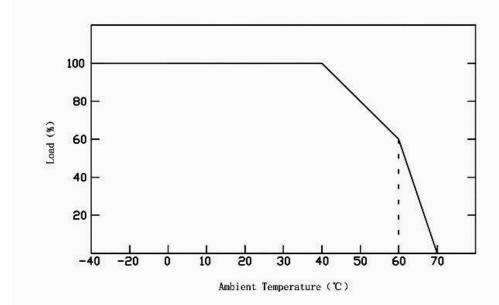
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- > Input with terminals Live(L) and Neutral(N) wires to be connected AC;
- > Output LED SEC output Positive (LED+), output negative(LED-). Connected to LED light.
- > Output terminals DIM (+) to 0/1-10V dimmer signal(+),DIM (-) white connect to 0/1-10V dimmer signal (-)
- > Please DO NOT connect "DIM-" to "LED-", "DIM+" to " LED+" ,or other incorrect connection.
- Please make sure your connect these correctly otherwise your product will not function correctly and could be damaged.

Derating Curve

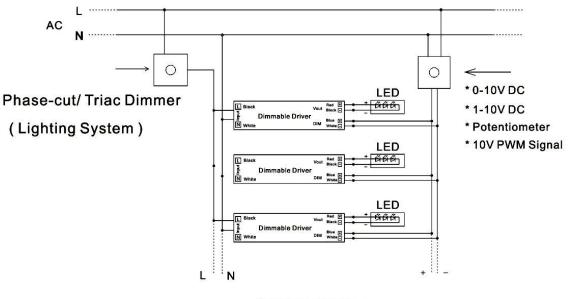


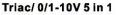


> Please refer to the Derating Curve and derate according to the temperature to extend their life.

## Dimming Operation and Connecting Diagram

Using two ways of dimming at the same time, customers should be assured that LED lighting is up to the max. Brightness then you could operate with the other dimming;

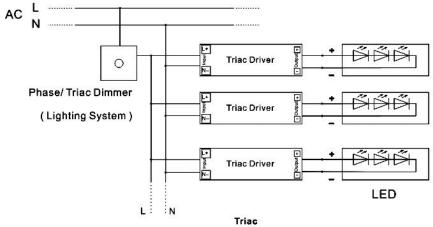




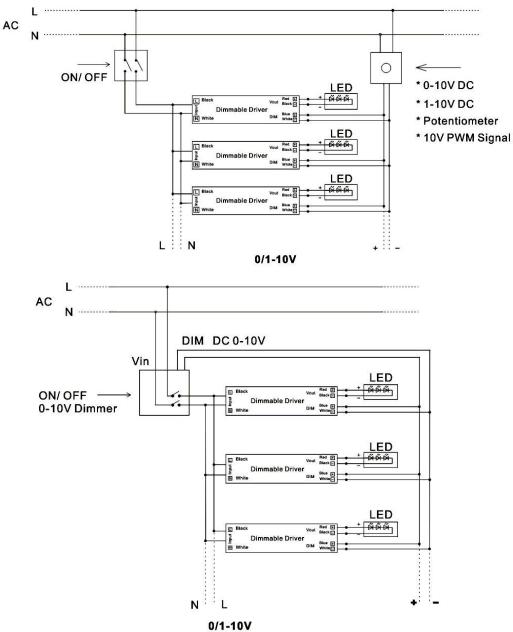
#### Using one dimming ---TRIAC/Phase cut dimming

- 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 of lighting system.
- Working with forward phase /leading edge ,MLV and Reverse phase /trailing edge ,ELV,TRIAC dimmers
- Min loading is about 10%
- > Please try to use dimmers with power at least 1.5 times as the output power of the driver.





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





#### Instruction:

- > This driver should be installed by qualified and professional person;
- > Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
- > Ensure that wiring is correct before test in order to avoid light and power supply damage.