

100W, A2V100 Series

- power to last for life time -

LED Lighting Driver



Features

- Wide range input voltages with **90 ~ 264VAC**
- **Constant Voltage** output, suitable for remote locations.
- Fully encapsulated with waterproof **IP67** level compliant,
- Reliability **Protections**: short circuit/over current / over voltage
- **High Efficiency**, 88% @ 115Vac and 90% @ 230Vac, Full Load
- 100% full load QC burn-in test
- High reliability, **MTBF 50,000 hrs @ 25°C**, full load, nominal input
- **3-year** manufacturer warranty



Model No.	Output Voltage (V)	Output Current (A)	OVP (Vmax.)	OCP Hiccup (%)	Efficiency (%)
A2V 100M 12M 833-11	12	8.33	16	110 -180	90
A2V 100M 24M 405-11	24	4.05	34	110 -180	90
A2V 100M 36M 275-11	36	2.75	50	110 -180	90
A2V 100M 42M 225-11	42	2.25	57	110 -180	90
A2V 100M 48M 195-11	48	1.95	63	110 -180	90
A2V 100M 54M 175-11	54	1.75	75	110 -180	90
A2V 100M 81M 123-11	81	1.23	100	110 -180	90
A2V 100M 105M 095-11	105	0.95	140	110 -180	90

Part Number Info

XXX XXX X XX X XXX - XX

① ② ③ ④ ⑤ ⑥ ⑦

- ① (Input Voltage Type)(Range)(Constant Voltage/Current)
- ② Output Wattage (w) ③ Reserved
- ④ Output Voltage (v) ⑤ Housing Type
- ⑥ Output Current (x10mA)
- ⑦ (Output Channel)(Isolated Class)

Input Specification					
Parameter	Conditions/ Description	Min.	Normal	Max.	units
Input Voltage Range	Universal Input	90	100 - 240	264	Vac
Input Frequency Range		47		63	Hz
Input Current	100Vac in, 100W output			1.5	A
Power Factor	At 100 - 220Vac Input	0.95			
Inrush Current	At 264Vac Input, 25°C cold star			100	A

Output Specification					
Parameter	Conditions/ Description	Min.	Normal	Max.	units
Line Regulation				±1	%
Load Regulation				±5	%
Voltage Accuracy	% of Vout			±5	%
Ripple and Noise	20MHz Bandwidth, refer Note-1			2	%pk-pk
Dynamic Response	Output Deviation R/ S: 1A/ uS; settign time load: 25%~75% full load			5%Vo; 10mS	
Over shoot	when power tur n on or of f			5	%
Tur n-On Delay	Measur ed at 100Vac - 240Vac Input and Full Load			5	S

General Specification					
Parameter	Conditions/ Description	Min.	Normal	Max.	units
Isolation Voltage	Input to output Ref er to Note-2; Input to Chassis	3000; 1500			Vac; Vac
Efficiency	Ref er to individual models		90		%
MTBF	Telecor dia SR-33, 25°C		50,000		Hours
Oper ating/ Storage Temperature		-35 / -40		60 / 80	°C
Relative Humidity	Non-Condensing (oper ating)	10		100	%RH
Weight			950		g
Safety Agency Approval	UL8750, EN61347-2-13:2006, IEC61347-2-13				

EMC					
Parameter	Standard	Level			
Emissions					
Conducted	EN55015		B		
Radiated	EN55015		B		
Harmon ic Dist or tion, Current Emission	EN61000-3-2		Compliant		
Voltage Flicker and Fluctuation	EN61000-3-3		Compliant		
Electrostatic Discharge (ESD)	EN61000-4-2		4		
Radiated RFI	EN61000-4-3		3		
Fast Transients - burst	EN61000-4-4		4		
Input Line Surge Immunity	EN61000-4-5		4		
Conducted RFI	EN61000-4-6		Compliant		
Power Fr eq Magnetic Field	EN61000-4-8		Compliant		
Voltage Dips	EN61000-4-11		Compliant		
Electromagnetic Compatibility (EMC) P6-1	EN61000-6-1		Compliant		
Electromagnetic Compatibility (EMC) P6-3	EN61000-6-3		Compliant		

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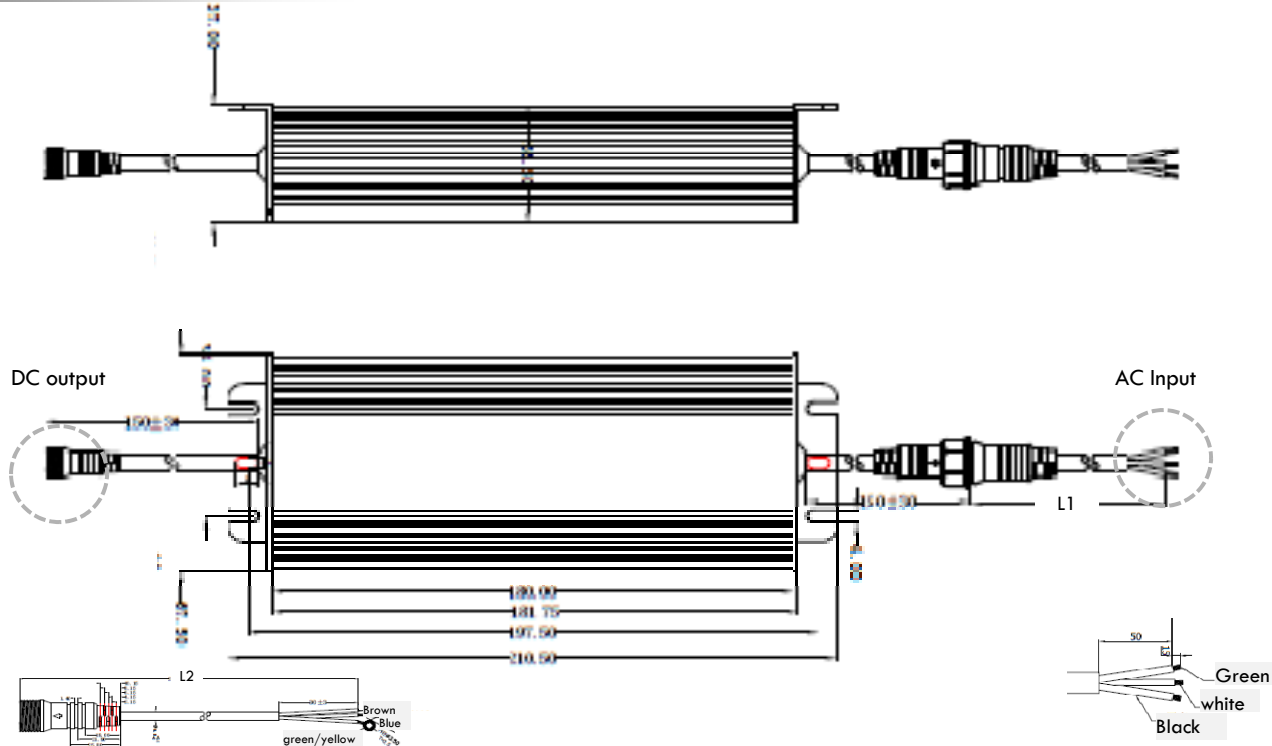
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Mechanical Layout

Dimension:

- 180.0 (L) x 67.5 (W) x 36.5 (H) mm
- tolerance: ± 0.5 mm



output wiring assembly – SJTW 18AWG 2C

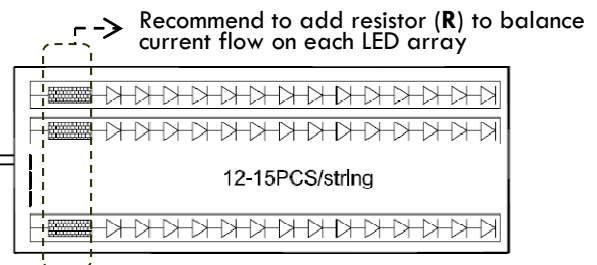
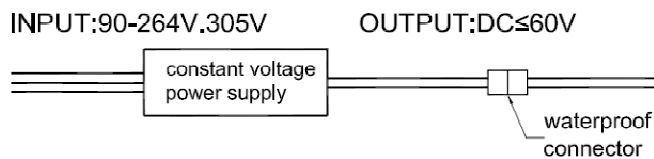
- Brown(+), Blue (-), green/yellow (GND)
- L2: 150±30mm

Input wiring assembly – SJTW 18AWG 3C

- White(N), Black (L), Green(G)
- L1: 600±20mm

Design Reference

water proof constant voltage power supply :



$$R = [V_{dc} - (V_{f1} + V_{f2} + \dots + V_{fn})] / I_f$$

V_{dc} = Driver Rated DC output voltage

V_f = LED's forward voltage

I_f = LED's forward current

Case Study:

LED Driver : A2V100M36M275-11 (36V/2.75A)

Total 12 LEDs connected in series on each array

Total 4 branches connected in parallel

V_f = 1.5V, I_f = 0.8A

$$R = [36 - (12 \times 1.5)] / [4.17 / (0.8 \times 4)] = 13.85 \text{ Ohms}$$

Notes

1. Output connected in parallel with 0.1uF ceramic capacitor and 10uF electrolytic capacitor.
 2. Primary to Secondary Isolation test not to be carried on power supply.
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