

120W CV LED DRIVER TECHNICAL DATASHEET

Product : 120W CV LED Driver
Product Output rating : 12V @ 10A
Model No : BI-WMB-3184-012 100



Scope

The BI-WMB-3184 series is a 120W, Constant-Voltage LED driver that operates from 120-290 Vac input with excellent Efficiency, Power Factor and THD. It is created for LED Signage and Strip Lights. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

Features

- Wide Input operating Voltage
- High Power Factor - >0.9
- High Efficiency - >82%
- Low THD (<10%) - Compliance to IEC 61000-3-2
- Precision Constant Voltage Limit
- Better Line & Load Regulation performance (CC Limit)
- AC input High Voltage Cut-Off and Support up to 440V AC
- AC input Low Voltage Cut-Off
- Short circuit & Over Load Protection - Auto Recovery
- Surge Protection - as per IEC 61000-4-5 : 6 kV (L-N, L-E & N-E)
- EFT - as per IEC 61000-4-4 : 6kV (L-N, L-E & N-E)
- IP67

Technical Specifications

Input Requirements	Nominal Input Voltage	240V AC
	Operating Voltage Range	120V to 290V AC
	Phase	Single Phase
	Frequency Range	47-53 Hz
	Input Current	< 0.7A @ 240V AC
	In-rush Current	< 30A @ 270V AC
	Input Protection	Fuse of appropriate rating to be used for prevention of fire hazard.
	Efficiency	> 82% at 240V AC & Full Load
	Power Factor	> 0.9
	Input Current Harmonic Distortion	< 10%
	Input High Voltage Cut-off	Between 310-325V AC Unit will shutdown and auto recovery with 5-10V hysteresis
	Input Low Voltage Cut-off	Between 105-115V AC Unit will shutdown and auto recovery with 5-10V hysteresis
Output Requirements	Output Voltage	$V_o = 12V$
	Output Current	$I_o = 10A$
	Voltage Regulation – (Line & Load)	$\pm 0.5V$
	Short Circuit Protection	Auto Recovery
	Over Load Protection	Hiccup type
Safety Requirements	Isolation (Hi-Pot Test)	L, N to DC Output : Should withstand 1.5KV for 1 Minute L,N to Earth : Should withstand 1.5KV for 1 Minute
	Insulation Resistance	>10M Ω at 500V DC
	Earth Leakage Current	<3mA
Environmental Requirements	Operating Temperature	-10°C to +50°C
	Operating Relative Humidity	0-95% RH
	Storage Temperature	-20°C to 80°C
	Ingress Protection	IP67
EMC Requirements	Electrical Fast Transients	As per IEC-61000-4-4; Level-5 (CM-6kV, DM-6kV)
	Surge Immunity	As per IEC-61000-4-5; Level-5 (CM-6kV, DM-6kV)
Wiring & Connections	AC Input	1.0mm ² , 3-core cable
	DC Output	4.0mm ² , Red Wire 4.0mm ² , Black Wire
Mechanical	Enclosure	Aluminum Extrusion
	Dimensions	Mounting Holes : 295.0 x 65.3 x 41.0 mm (L x W x H)
	Marking	All Markings/ labels to be given on enclosure in non-erasable form