DIMMABLE 56 WATT LED DRIVER WITH AUXILIARY VOLTAGE OUTPUT

DESCRIPTION

This 56W LED power supply provides power for driving and dimming High Brightness LEDs. Features include a 0-10Vdc Analog Control interface, external thermistor interface for LED load protection and either a standard 12V or optional 5V auxiliary voltage output for powering a LED fixture cooling source.

FEATURES

- **Wide rated input voltage range of 120 Vac to 277 Vac**
- **SELV, LPS, Class 2 Output**
- **Constant current output for driving and dimming LEDs**
- **1% to 100% smooth wide range dimming performance (proprietary current pulsing method)**
- **Auxiliary voltage output (5V or 12V) for powering LED fixture cooling source (2 watts maximum)**
- **External thermistor connection for LED load protection**
- **Efficiency greater than 85% (no load on auxiliary output)**
- **Remote Mounting up to 10 ft (3 meters)**
- **Dry/Damp Location Rating**

Model Options				
Model #	***Output Voltage Range***	***Drive Current***	***Recommended # of LEDs***	***Output Power***
76-1-2100-ANA-x	10 to 27 Vdc	2100 mA	4 to 8	56.7 watts
76-1-1750-ANA-x	10 to 28 Vdc	1750 mA	4 to 8	49 watts
76-1-1400-ANA-x	10 to 28 Vdc	1400 mA	4 to 8	39.2 watts

x=12V → 12 Volt Auxiliary Output (standard)
x=5V → 5 Volt Auxiliary Output (optional- consult factory for details)

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Input Specifications

Rated Input Voltage and Frequency	120 to 277 50/60		Vac Hz
Input Voltage Range Input Frequency Range	108 to 305 47 to 63		Vac Hz
Rated Input Current	@ 56.7 watt output DC current load & 2W on auxiliary voltage output	0.57A/0.28A/0.25A @ 120V/277V/240V	
Maximum Input Power	@ 120 Vac input	69	W
Power Factor	@ 120 or 277 Vac 100% load	0.96	W/VA min
Inrush Current	@ peak 1/2 sinewave 120 Vac	15	Apk
Input Current Total Harmonic Distortion	@ 120 or 277 Vac 100% load	12	% max
Standby Power Consumption		1.8 watts @ 120 Vac typical	

Output Specifications

Rated Constant Current Output Power		56.7	W max
Rated Auxiliary Voltage Output Power		2	W max
Maximum Open Circuit Output Voltage	No Load	33	Vdc

	Output Current	Output Power
Output Current, Output Power	2100mA	56.7 W
	1750mA	49 W
	1400mA	39.2 W

Constant Current Output Ripple and Noise	20 Mhz Bandwidth	1.6	Vpk-pk
Auxiliary Voltage Output	5 Vdc 12 Vdc less than1% load/line regulation	@ 400 @ 160	mA mA
Efficiency	@120 Vac (no load on auxiliary output)	>85	% full load
Turn on Delay		0.7	Sec typical

Environmental Specifications

Location Rating	IP50 dry/damp location
Operating Ambient Temperature (with adequate heatsinking)	-20 °C to +55 °C
Maximum Case Temperature	Tc = 75 °C
Storage Ambient Temperature	-40 °C to 80 °C
MTBF MIL-HDBK-217	>200,000 hours @ T case 65 °C
RoHs Compliant	

Protection

Output Protection	Over voltage, over current, short circuit protection
Over Temperature Protection	Power Supply will throttle back output current gradually when case temperature reaches 80 °C nominal.

Safety and EMI/EMC Specifications

Safety Approvals	UL 8750 Class 2, SELV (pending) IEC 61347-1 (pending IEC 61347-2-13 (pending) IEC 62384 (pending)	UL CE
Conducted & Radiated Emissions	EN55015 Conducted (pending) FCC Title 47, Part 15 (pending) ICES-003	Class B
EMC	EN 61547-Equipment For General Lighting Purposes (pending)	
EMC	EN61000-3-3 (Voltage Fluctuations) EN61000-3-2 (Class C)	

Analog Interface Specifications

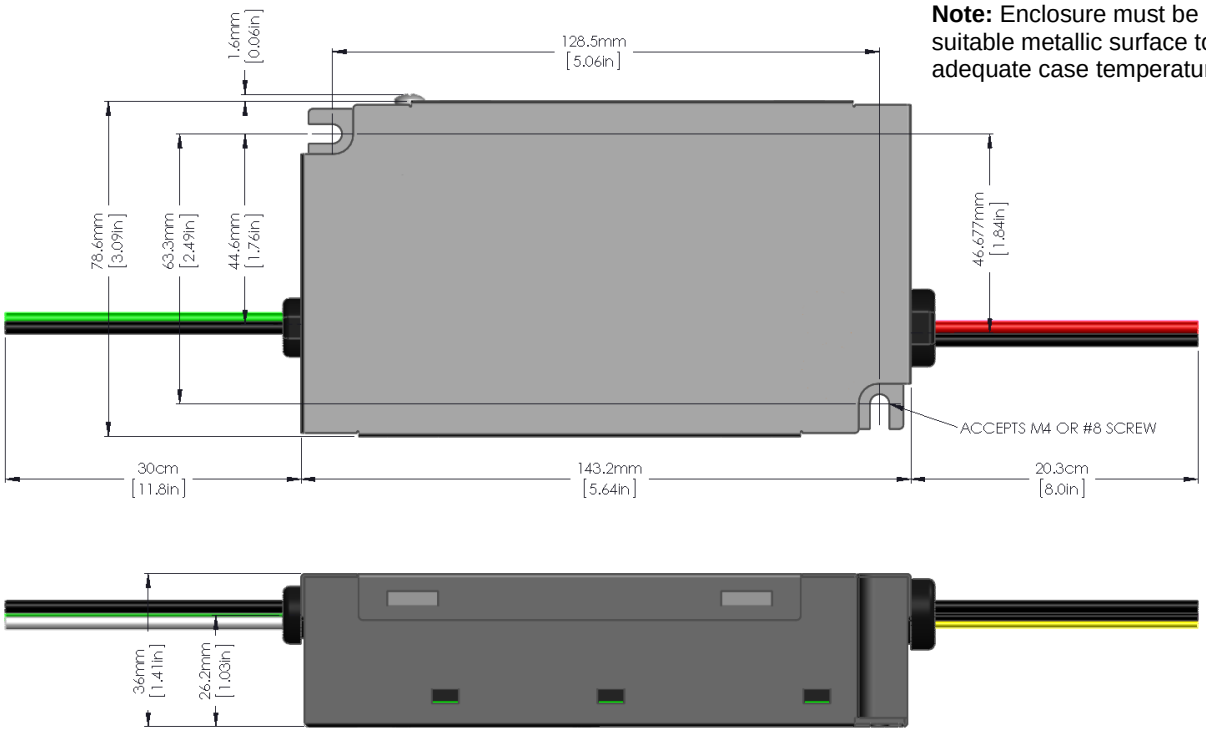
Control Method	Analog 0-10 Vdc IEC 60929 or Class 2 output	output sources 0.5 mA maximum or accepts variable 0-10Vdc source
Loss of Analog Input Signal	Outputs will go to 100% light intensity in less than 1 second	

External Temperature Sensor Specifications

External NTC Derating Temperature Characteristic	Derate output current linearly at a temperature sense point of 80 °C to a 10% load current when temperature reaches 110 °C. Implemented with a 47000 Ω NTC thermistor, NTCALUG03A473HC, Vishay, Curve B=3740 .

MECHANICAL FEATURES

- **Dimensions:** **LxWxH** 5.64” (143.2mm) x 3.09” (78.6mm) x 1.41” (36mm)
- **Enclosure:** steel enclosure



Note: Enclosure must be mounted to a suitable metallic surface to maintain an adequate case temperature

INPUT AND OUTPUT CONNECTIONS

INPUT CONNECTION	*OUTPUT POWER CONNECTION*	*INTERFACE CONNECTION*	*5/12 V AUXILIARY*	*THERMAL FEEDBACK*
3 wires, 18AWG Line, Neutral, Ground	2 wires, 18AWG +LED & –LED Red & Black	2 wires, 22AWG +DIM & -DIM Purple & Gray	2 wires, 22AWG +Fan & -Fan Yellow & Black	2 wires, 22AWG +NTC & -NTC Orange & Brown

WIRING DIAGRAM