

300 Watt Power Supply for LED Fixtures

model: LED300

technical data sheet



The *LED300* power supply distributes DMX512 data and 24 Volt power to lighting fixtures and accessories. Primarily designed to power and control Color Kinetics ColorBlast 12 LED fixtures, the *LED300* can also drive Color Kinetics iColor Cove, Altman Spectra PAR, and similar products, as well as color scrollers, gobo rotators, and other powered DMX512 controlled accessories.

Power and data are provided on six 4-Pin female XLR connectors. Power appears on pins 1 and 4, Data is provided on pins 2 and 3. Polarity and data levels are field adjustable by the factory or a qualified service technician.

The *LED300* features our DownShifter technology that shifts incoming DMX512 data and outputs the desired channels as channels 1, 2 and 3. This allows all fixtures to be set to address "001" with the power supply routing the proper signals to the proper outputs. To enable DownShifter mode the address switch is set to a valid DMX512 address (1 through 512). The system then

operates similar to a dimmer pack with the first fixture being controlled by the selected channel (and the two successive channels), the second fixture being controlled by the selected channel plus three, the third fixture being controlled by the selected channel plus six, and so forth.

DownShifter mode is disabled (so DMX512 data passes through to every output unmodified) by setting the address switch to 000.

The *LED300* can provide 5 volt differential or single ended 24 volt data. The majority of DMX512 controlled accessories that operate on 24 volt power use 5 volt differential data. Original Color Kinetics ColorBlast and iColor Cove products also used 5 volt differential data. Newer Color Kinetics ColorBlast 6 and ColorBlast 12 require 24 volt single ended data (3-wire protocol). Control data is placed on pins 2 and 3. Differential data uses pin 2 for data- and pin 3 for data+. Single ended data places the same signal on both pin 2 and pin 3 so either pin can be used for control.

The *LED300* is convection cooled (no fan) for silent operation. The supply is provided with a North American Parallel Blade with Ground (PBG) mains connection.

Doug Fleenor Design, Inc. is not affiliated with Color Kinetics, Inc. or Altman Lighting, Inc. ColorBlast 6, ColorBlast 12, and iColor Cove are trademarked products of Color Kinetics Inc. Spectra PAR is a trademarked product of Altman Lighting, Inc.

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SPECIFICATIONS: Model LED300 - 300 Watt Power Supply for LED Fixtures

Input power: 115VAC, 50/60 Hz. 5.5A. Required UL statement: The LED300 must be located near the power outlet powering it and the outlet must be easily accessible.

Input signal: DMX512, DMX512/1990, DMX512-A (250 Kb/s, 0.2 Volts min. 12 Volts max.)

Input circuit: Transient protected EIA-485 transceiver (LT1785)

Input protection: 15,000 Volt transient, ±60 Volt continuous

Input connector: Gold plated 5 pin male XLR connector (Neutrik D-1 series)

Input pass through: Gold plated 5 pin female XLR connector (Neutrik D-1 series) All five pins are passed through

Input isolation: 600 Volts

Output signal: DMX512-A when set for 5V differential data
DMX512-A timings and protocol with 24V single ended levels when switched to 24V data

Output circuit (5V): Transient protected EIA-485 transceiver (LT1785) yields an approximate 3V signal into 120 Ohms

Output circuit (24V): MC34074 high speed op-amp tuned for 4uS bit period (250 Kb/s) yields approximately 22V at load

Output connector: Gold plated 4 pin female XLR (Neutrik D-1 series) rated at 10 amps

Output current (power): 12.5 amps (300 watts) continuous [limited to 5 amps (120 watts) maximum per output]

Connector pin out:

	ColorBlast 12		iCove	
	Single End Data		Differential Data (DMX512)	
Model	LED300 (standard)	LED300-S1 (on request)		LED300-Differential (on request)
Pin 1	24VDC	Common	Common	Common
Pin 2	Data +	OR Data +	OR Data -	Data -
Pin 3	Data +	Data +	Data +	Data +
Pin 4	Common	24VDC	24VDC	24VDC

Indicators: Red/green data type indicator, Red/green polarity indicator, Green signal indicator, Three digit DMX Start Address

User controls: Three pushbuttons to increment DMX Start Address (hundreds, tens, and ones)

Operating modes: Below is a list of start address and their corresponding outcome.

000 = Standard power supply operation. Connected devices must be addressed as needed.

1 - 512 = Enables DownShifter power supply operation. Connected devices are to be addressed to start address 1.

Standalone modes: Below is a list of start address and their corresponding outcome.

6nn = Fixed colors where nn selects approximate Roscolux™ gel color.

7nn = Fading effects. The tens place selects an effect and the ones place adjusts the fade time.

8nn = Strobe effects. The tens place selects an effect and ones place adjusts flash rate.

900 = Random selection of fading and strobing effects.

Color: Black with white silkscreen nomenclature

Size and weight: 9.25" h X 5.25" d X 9.75" w, 7.5 pounds

Mounting options: Two 1/2" holes for half couplers or "C" Clamp and handle slot