400 Watt Power Supply for LED Fixtures
model: LED400
technical data sheet

The *LED400* power supply distributes DMX512 data and 24 Volt power to popular LED lighting fixtures. Primarily designed to power and control Color Kinetics ColorBlast 12 fixtures, the *LED400* can also drive other, similar products.

Fixture power and data are provided on eight 4-Pin female XLR pigtails. Power appears on pins 1 and 4, data is provided on pin 3.

The *LED400* features our DownShifter technology that shifts incoming DMX512 data and outputs the desired channels as channels 1, 2 and 3 [plus 4 and 5 in 5-channel mode]. This allows all fixtures to be set to address "001" with the power supply routing the dmx signals to the proper outputs. To enable DownShifter mode, set the address 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 two [or four] successive channels), the second fixture being controlled by the selected channel plus three [or five], the third fixture being controlled by the selected channel plus six [or ten], and so forth.

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

The *LED400* operates in either 3-channel mode or 5-channel mode. In three channel mode, each output consumes three dmx channels (24 channels for a fully populated power supply). In five channel mode, each output consumes five dmx channels (40 channels if all 8 outputs are used). To mix three and five channel fixtures, the user must set the power supply to five channel mode. In this instance the three channel fixtures simply 'waste' two dmx control channels.

The *LED400* is sealed against dust and moisture. All connections are via attached pigtails. Address and mode settings are done using the RDM (Remote Device Management) protocol. The supply features a universal, power factor corrected, switch mode power supply (90 - 260VAC, 50/60 Hz). It is fitted with an attached NEMA 5-15P (parallel blade with ground) power cord.

The *LED400* is convection cooled and must be allowed free air circulation on four sides and across its heat exchanger.

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ColorBlast 12 is a trademarked products of Color Kinetics, Inc.

SPECIFICATIONS: Model LED400 - 400 Watt Power Supply for LED Fixtures

Input power: 90V - 260VAC, 50/60 Hz. 470W (at full load).

Required UL statement: The *LED400* must be located near the outlet powering it and the outlet must be easily accessible.

Inrush current: 20A @ 115V, 40A @ 230V.

Power factor: 0.99 typical, 0.95 minimum.

Efficiency: 85% typical

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 (Neutrik X series) on 12" pigtail.

Input pass through: Gold plated 5 pin female (Neutrik X series) on 12" pigtail. Only pins 1, 2, and 3 pass
through.

Input isolation: 600 Volts

Output signal: DMX512-A timings and protocol with 22V single ended levels.

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

Output connectors: Gold plated 4 pin female XLR (Neutrik X series) on 12" pigtails.

Output current (power): 17 amps (400 watts) continuous, limited to 5 amps (120 watts) per output.

Connector pin out: Pin 1   24VDC power
                           Pin 2   Not Connected
                           Pin 3   22V Data
                           Pin 4   Common

Indicator: Two color LED: Red = power, Green = signal.

User controls: None: All *LED400* parameters are set via the RDM (Remote Device Management) protocol.

Operating modes: Below is a list of dmx start addresses and their corresponding modes of operation.

                           000   Pass thru mode. Fixtures are typically set to different addresses.
                           001-512 DownShifter mode. Fixture addresses must be set to 001.
                           6nn   Fixed colors where nn selects approximate Roscolux™ gel color.
                           7nn   Fading effects. The tens place selects an effect and the ones place sets the fade time.
                           8nn   Strobe effects. The tens place selects an effect and the ones place sets the flash rate.
                           900   Random selection of fading and strobing effects.

Color: Black with laser engraved nomenclature

Size and weight: 9.25" h X 6.25" d X 8.25" w, 11 pounds

Mounting options: One 1/2" hole for half coupler or "C" clamp. Safety cable should be looped through the carry handle.