

## Network Connectivity - DMX 512 Isolated Splitter

Doug Fleenor Designs DMX 512 Optosplitter



The DMX splitter is available in standard configurations: three, and five from a single DMX input. An enhanced five output splitter with miswiring and lightning protection, and a universal power supply is also available (see the model 125EE data sheet).

Each output is electrically isolated from the input, and from every other output, by 2500 volt optical couplers. Each output has its own line driver and associated power supply.

Single output unit, for amplification and isolation without splitting, are also standard products. The DMX splitter allows connection of DMX receivers (dimmers, color changers, moving lights, etc.) in a star configuration as opposed to a daisy chain configuration. In a star configuration, each control cable is run to a central point, in this case the splitter. In a daisy chain configuration all the devices are connected on one control cable, the output of one feeding the input of the next. It is not good practice to simply split a DMX control cable using a "wye" cable as this can cause signal corruption due to reflections. Typical uses of the splitter include splitting the control signal between stage right and stage left dimmers, running an isolated split to a string of color changers, splitting and isolating a feed to a wall outlet for temporary or rented dimmers, isolating a stack of dimmer packs from each other, etc.

**SPECIFICATIONS:** All specifications meet or exceed DMX512 requirements

Input circuit: EIA-485 receiver with 120 ohm termination resistor between +Data and -Data (Units with feed through connectors do not have internal termination)

Input signal: 0.2 volts minimum, 12 volts maximum

Output circuit: EIA-485 driver

Connectors: Gold plated 5 pin Neutrik D-1 Series (3 pin connectors or terminal blocks optional)

Feed through: A non-isolated feed through connector is standard on the eleven output model and is optional on the one, three, and five output models.

Isolation: 2500 volt optical coupler, 1500 volt split bobbin transformer

Power input: 100 - 120 volts, 50/60 hertz, 12 watts (208 - 240 volt optional)

Color: Top, bottom and sides: Silver hammer tone Front and back: Black

Model	# Outputs:	Size:	Weight:
121	1	6.5" deep, 1.7" high, 6.5" wide	2.1 pounds
123	3	6.5" deep, 1.7" high, 6.5" wide	2.6 pounds
125	5	6.5" deep, 1.7" high, 8.25" wide	3.3 pounds

### ORDERING INFORMATION

Ordering Numbers: 65-OSU01-001-00 One input one output  
65-OSU02-001-00 One input three outputs  
65-OSU03-001-00 One input five outputs

#### Applications

- Distribution for small to medium projects
- Not RDM enabled

Specification sheets are subject to change without notice. For the most recent version, please refer to [www.ilight-tech.com](http://www.ilight-tech.com).

#### Product Application

Hypnotica iS

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## DMX512 Isolated Splitter -- Selected Features

The following information is provided to assist you in determining if the DMX512 Isolated Splitter would be of benefit in your installation.

FEATURE	BENEFIT
Input is electrically isolated from output.	Console is protected from failed dimmers, lightning damage, and any other cause of high voltage on the control cable.
Outputs are isolated from each other.	Color changers, moving lights, other dimmers are protected from each other.
Outputs are separately buffered.	Reflections, short circuits, etc. on one output cannot affect another output.
No user adjustments.	Easy "fool proof" installation.
DMX pinouts are printed on the splitter	Assists in proper control wiring.
Powder coated 1/10" aluminum chassis.	Rugged and attractive for years of service.
Gold plated Neutrik 5 pin connectors.	Assures reliable connections.
All integrated circuits are socketed.	Eases field service.
Uses 2500 Volt optical couplers.	Easily isolates line voltage failures. Usually with stands electrical storm damage.
Forty times faster than DMX data rate.	Reliable, high speed data throughput. Units can be cascaded.
"Air gap" circuit board under isolator.	Prevents arcing across circuit board.
60 mA drive current.	Reliably drives long control cables.
Power and input signal indicators.	Simplifies system trouble shooting.
5 year warranty.	Peace of mind.

Product Application

Hypnotica iS