

NLED DMX-512 Amplifier

This device allows amplification, splitting, and repeating of DMX-512 networks. With full R.D.M.(Remote Device Management) support for bidirectional communication between transmitters and fixtures.

Features:

- RJ45 connections to the DMX networks. ESTA standard pinout.
- Full R.D.M.(Remote Device Management) compatibility.
- Compatible with additional alternate START code packets(unidirectional only).
- R.D.M. management of the device.
- Isolated DMX data input, 3000 volts.
- Wide input voltage range.
- Common/Standardized power input connector.
- Optional earthing connection.
- Built in selectable termination via a switch for DMX input.
- Protected
 - $\pm 15\text{kV}$ ESD protection for DMX input and output.
 - Short protection for DMX input and output.
 - Transient voltage protection for power input.
 - Fail safe internal fuse
- Small Size.
- Convenient mounting flanges.

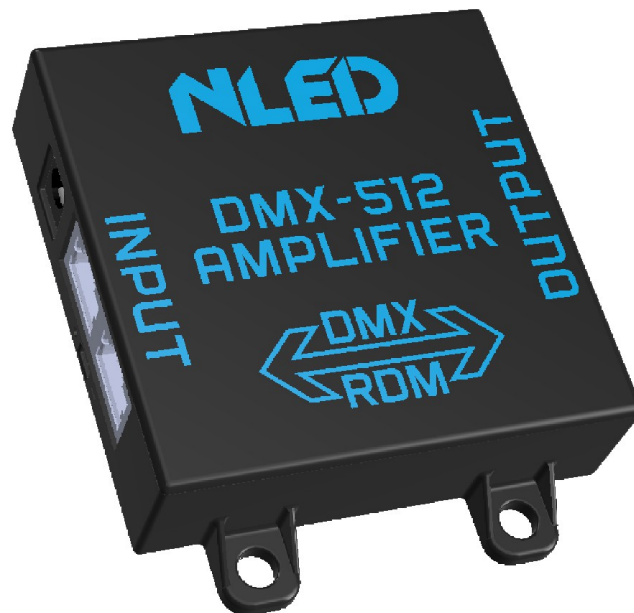


Fig. 1A

Specifications

Input Voltage, Recommended	9 – 24 volts
Input Voltage, Maximum	5 – 32 volts
Current Draw	< 200mA
Quiescent Current Draw	< 80mA
Connector, Power	2.1mm x 5.5mm Barrel, Center Positive
Connectors, DMX	RJ45, ESTA Standard Pinout
Input, DMX	2x ports, 3kV isolation
Output, DMX	1x port
Protocol Support*	DMX-512, R.D.M.(Remove Device Management)
ESD Protection, Input & Output	±15kV HMB
Maximum Bit Rate	20Mbps
Maximum Devices On Network	32
Total Dimensions, Enclosure	75mm x 99mm(with mounting flanges) x 22mm
Board Dimensions	70mm x 70mm x 17mm
Maximum Temperature	70C

*Other unidirectional protocols and alternate START code packets are supported.

DMX & RDM

This device transparently forwards data from the *input* to the *output* without alteration. DMX packets, RDM messages, alternate START code packets, non-conforming packets, and invalid data is forwarded from the *input* to the *output* unaltered.

When this device receives a valid RDM packet, it automatically configures the *output* to receive data from devices on that network. Any of the connected devices have 2.8mS to respond, as per the RDM specification. If no data is received within that time frame the *output* returns to the default transmission state. Connected fixtures that do not meet the RDM timing specifications may not have their response messages received by the RDM controller.

Supported RDM Command Classes

Device Info	Provides information such as version
Device Label	Customizable defined name, saved to persistent memory
Identify Device	Not implemented
Manufacturer Label	“NLED”
Product Details	“Splitter”

This device is fully compliant with the R.D.M. Specification.

DMX Termination

This device has an onboard terminator, it is enabled or disabled using the slide switch underneath the *input* RJ45 receptacles. If this device is the last device on the DMX network, that is furthest from the transmitter, then termination should be enabled. See Fig. 5B

Earth Connection

Earth connection is optional and usually not required. To utilize the earth connection use 18-24 AWG solid wire or tinned stranded wire and insert it into one of the two holes that are inside the opening on the side of the enclosure. See Fig. 5B

Pinout

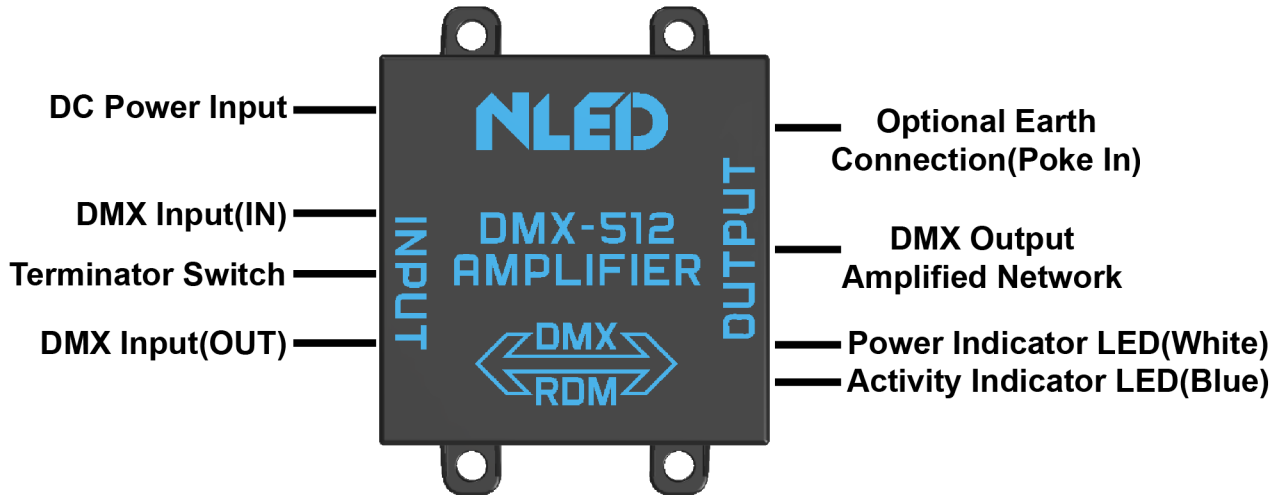


Fig. 4A

Connection

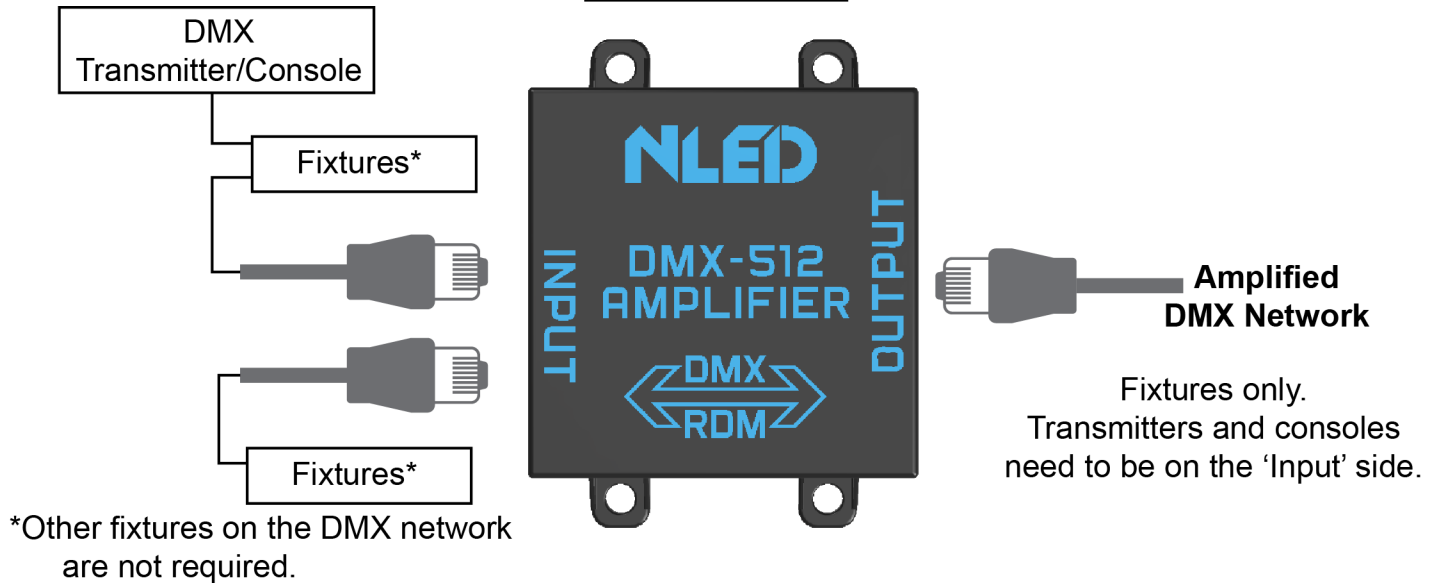
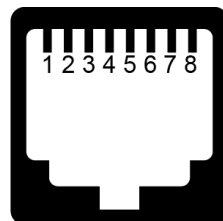


Fig. 4B

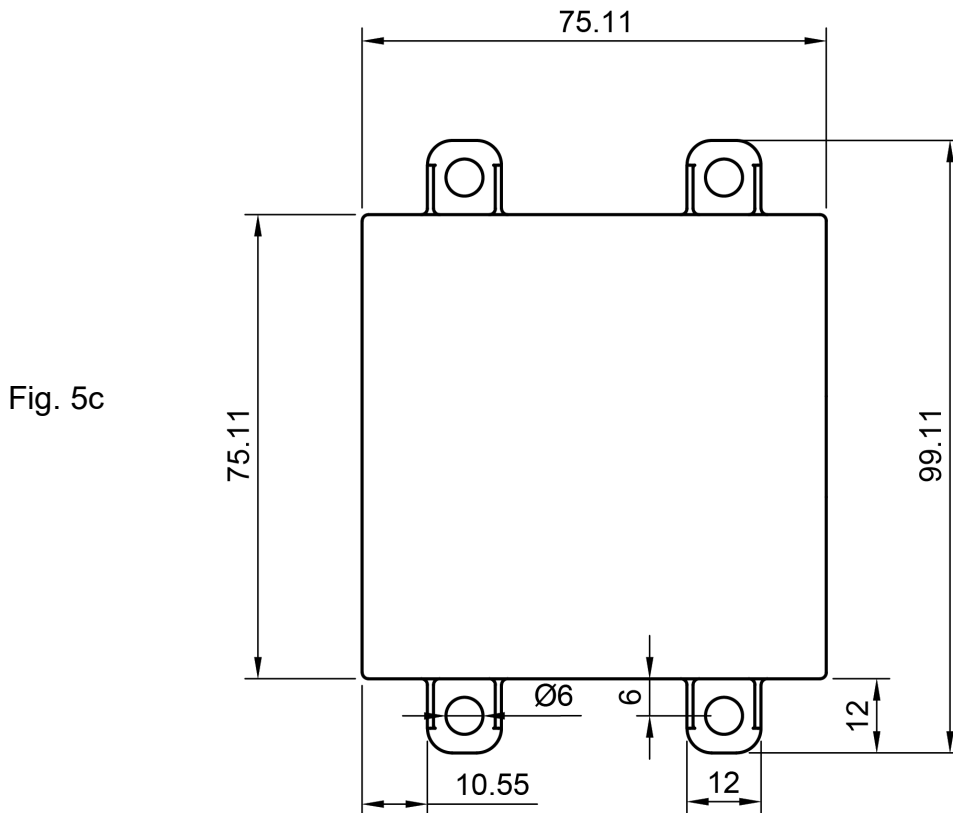
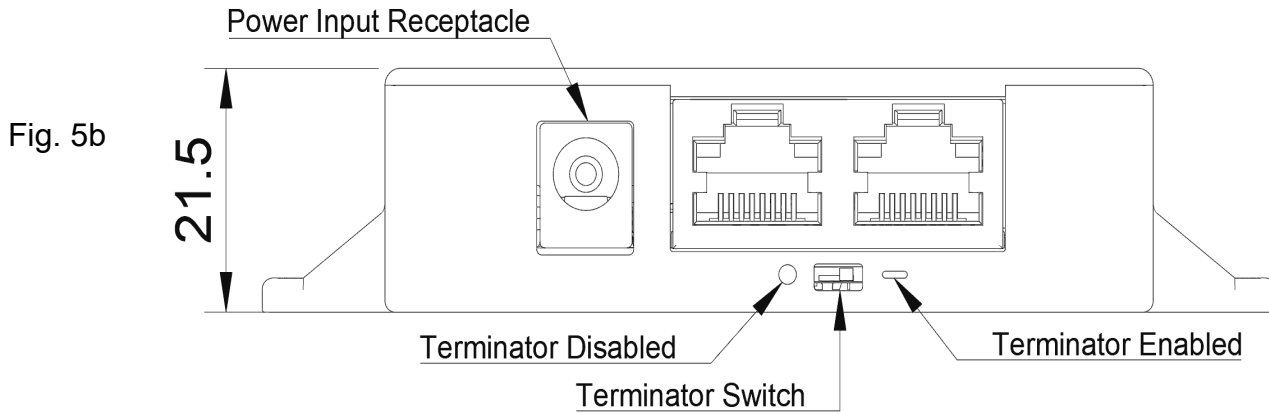
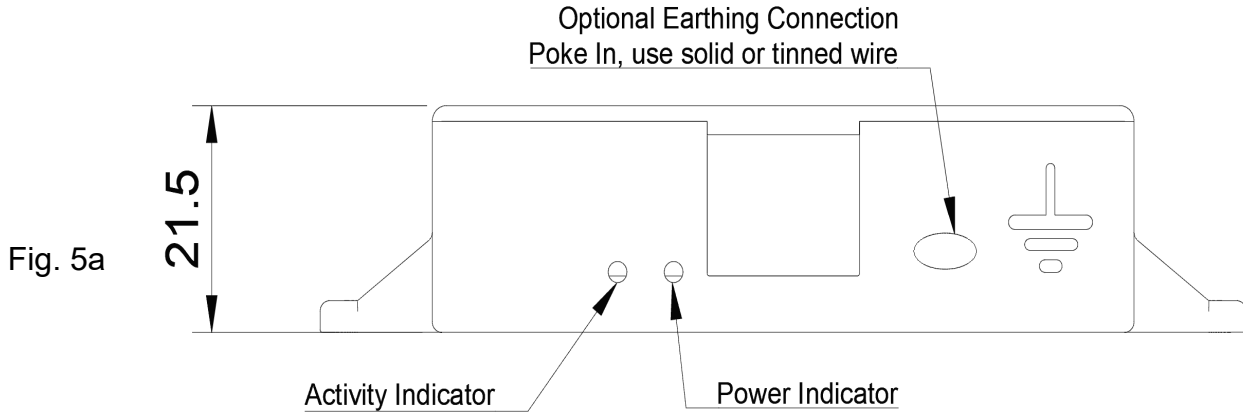


Receptacle

1: D+ 2: D-
7 & 8: Common/GND

Fig. 4C

Dimensions and Mounting



NORTHERN LIGHTS ELECTRONIC DESIGN

www.NLEDshop.com/dmxamplifier

www.NorthernLightsElectronicDesign.com

Mounting Notes:

Device is for indoor use only.

NLED is available to create new designs and derivatives of current designs customized to the clients requirements, please Contact Us with your specifications.