DMX512-A Splitter/Repeater Lightning

User Manual

Issue: Dec 2022

Pictured: DMX512 Splitter Repeater

Creative Lighting can be contacted through your local distributor.

Manufacturer:
Creative Lighting
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Overview

The $DMX_{512\text{-}A}$ splitter/repeater provides a $DMX_{512\text{-}A}$ input along with a passive loop through connection and four optically isolated $DMX_{512\text{-}A}$ outputs. Each of the four outputs can drive 32 $DMX_{512\text{-}A}$ devices. Please note that the maximum number of devices can vary depending on the quality of the receivers.

The splitter also incorporates an end-of-line termination resistor which is selectable via an internal dip switch together with the ability to connect or disconnect the signal ground.

Input Voltage:	9V to 40V DC
Power:	4.5W max
Operating Temperature:	0°C to +70°C
Data Protocol:	$DMX_{512\text{-}A}$
Terminals	
Inputs:	1 x $DMX_{512\text{-}A}$ input & 1x $DMX_{512\text{-}A}$ through
Outputs:	4 x $DMX_{512\text{-}A}$ outputs
Physical Dimensions	
Height:	105mm
Width:	71mm
Depth:	59mm
EMC Compliance:	C-Tick, CE
DMX Protection (IN)	+-60Vdc, +-15kV HBM ESD

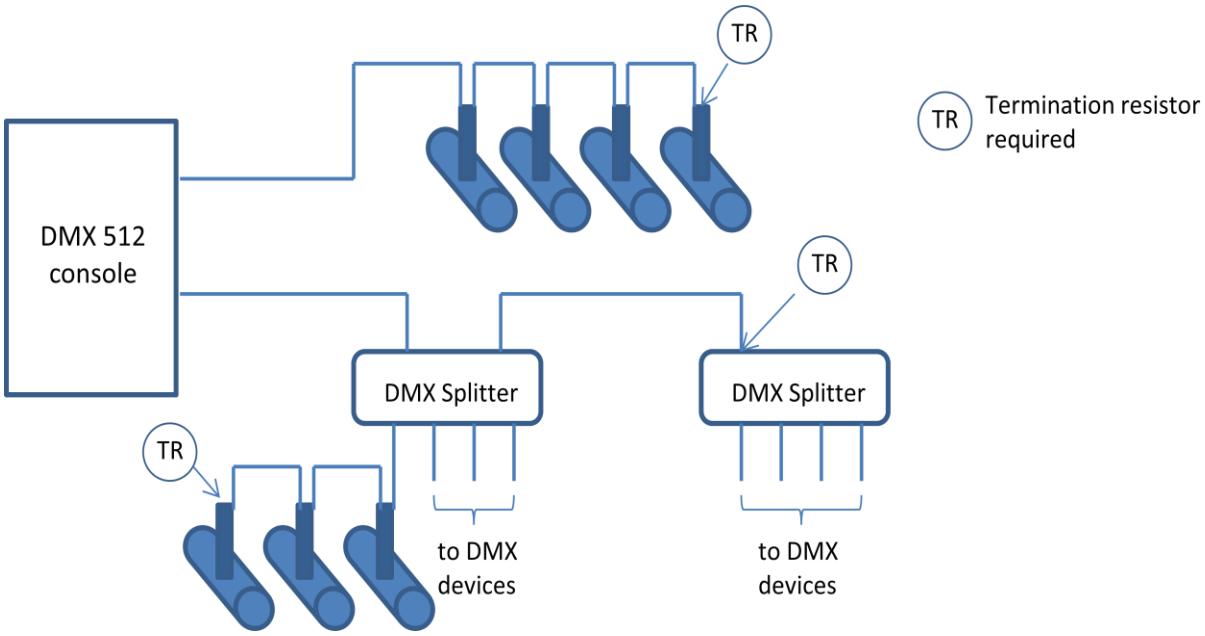
Splitter Pin Out

DMX out, 4 isolated outputs

Termination (for End of Line)

In order to reduce the possibility of data errors occurring in the DMX_{512-A} system, the device at the end of the DMX_{512-A} line should have a termination resistor fitted between the two data lines. The DMX_{512-A} splitter/repeater has an inbuilt termination resistor which can be selected via dip switch 1 inside the splitter/repeater unit.

The figure below is an example of a DMX_{512-A} system showing where termination resistors required.



Signal Ground Isolation

Dip switch 2 allows the signal ground to be connected or disconnected from the splitter/repeaters ground if required (refer to the DMX_{512-A} standard and the technical data provided with your DMX_{512-A} compliant devices by their respective manufacturers.

Indicating LEDs

1. DATA LED

When valid DMX_{512-A} is present, the data LED will be ON. When DMX_{512-A} is disconnected the DATA LED will turn off. In normal operation, while data is being transmitted to the splitter, the LED intensity will vary with the values of DMX being received. Note that when DMX_{512-A} unexpectedly drops out (for example the DMX_{512-A} cable is removed from the Splitter terminals while the splitter is on) the DMX_{512-A} transceiver may go into a high impedance mode in which case the DATA LED may not correctly indicate status which can be corrected by rebooting the splitter.

2. DC LED

When 9-40VDC is present, the DC status LED will be ON.

EMC Protection

EMC Protection is provided on all lines to the following standards.

- ESD, IEC61000-4-2 +-30kV contact, +- 30kV air
- EFT, IEC61000-4-4, 50A (5/50ns)
- Lighting, IEC61000-4-5, 19A (t = 8/20us)

Warranty

Refer to the Creative Lighting Warranty Statement