



railSplit dmx

User Guide



Please read these instructions before using the product.

This product has been designed & manufactured for professional use only. It should only be installed by a suitably qualified technician and in accordance with electrical regulations in the country of use.

Unless directed in the instructions there are no user serviceable parts inside the outer case of this product.

Always disconnect from the power supply when not in use.

Any specific IP rating, where appropriate, is given in the instructions. Unless otherwise stated this product is designed for indoor use only. If used outdoors it **MUST** be installed in an appropriate IP rated cabinet. Do not allow this product to be exposed to rain or moisture. Do not allow liquid to penetrate the product.

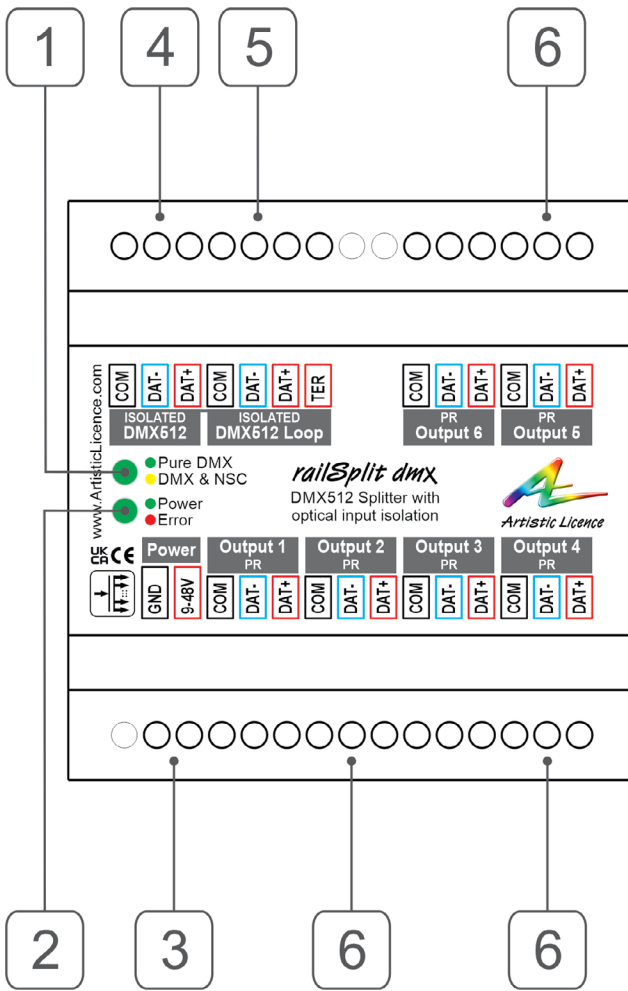
Please recycle all packaging.

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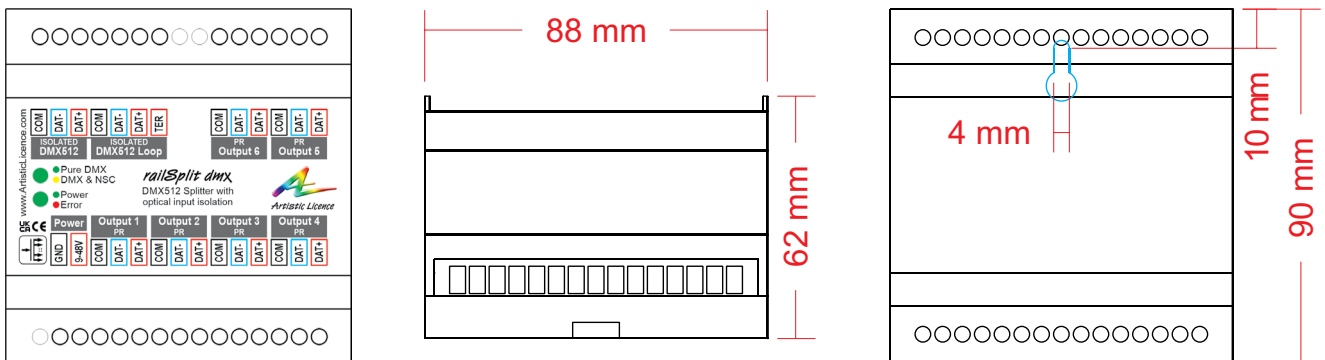
Connections



Reference	Type	Description
1	LED	Data Activity
2	LED	Power
3	Connection	Power Input
4	Connection	DMX512 Input
5	Connection	DMX512 Loop & Term**
6	Connection	Splitter Outputs

** A passive loop-through connection allows onward connection to other DMX512 devices. If this feature is not required then the signal must be terminated. The product contains an internal termination resistor. This is enabled by fitting a wire link between **Term** and **DAT+**.

Mounting Diagram



DMX512 Wiring

XLR Pin (Convention)	Function	Colour
1	Ground	Black
2	Data -	Blue
3	Data +	Red

Overview

railSplit dmx is a uni-directional DMX512 splitter and distribution amplifier. By design, railSplit dmx does not support RDM, allowing a cost-saving to be passed on to those customers who do not require bi-directionality. Customers requiring RDM functionality should order the sister product, railSplit RDM, as opposed to railSplit dmx.

Key features

- Input Optical Isolation
- Six independent outputs
- Uni-directional outputs
- DMX512-A compatible
- Surface mount or DIN rail mounted

Connections

Input

The DMX512 input is attached via three screw terminals. Please refer to the connections diagram.

Loop-through

A passive loop-through connection allows onward connection to other DMX512 devices. If this feature is not required then the signal must be terminated. The product contains an internal termination resistor. This is enabled by fitting a wire link between the screw terminals that will terminate the DMX line (Term and DAT+).

Output

Six DMX512 outputs are provided. Each output is capable of driving 32 additional DMX512 devices. It is not necessary to terminate any outputs that are not connected. However, a terminator must be connected to the final DMX512 device.

Internal Earth and Isolation

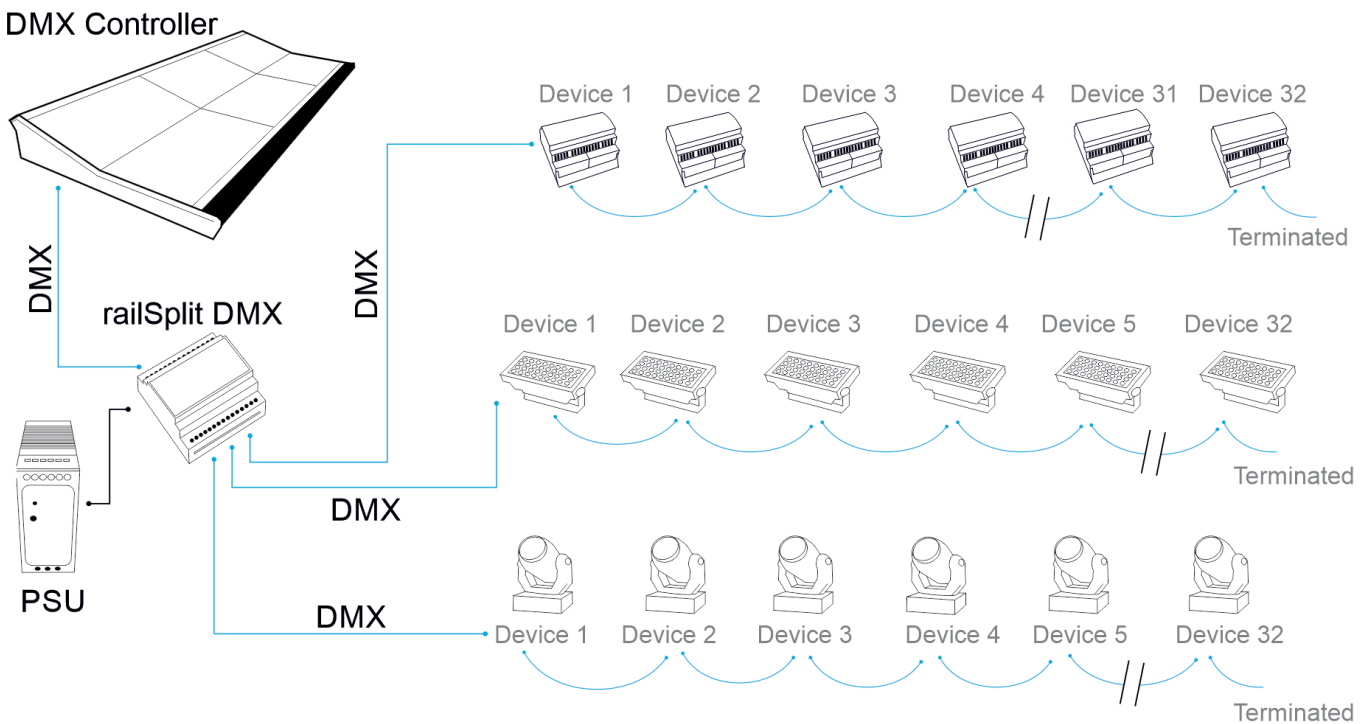
The following table summarises the internal earth interconnection and isolation.

Please note that we use the term Earth-Ground to avoid international confusion. In Europe Earth-Ground is called Earth; in the USA, Earth-Ground is called Ground.

Circuit	Description	
DMX512 Input (including Loop Through)	Type:	Isolated
	Pin 1:	Connects to internal isolated circuit. No connection to Internal Logic Ground
DMX512 Outputs	Type:	PSU referenced
	Pin 1:	Connected to Internal Logic Ground
Internal Logic Ground	Connected to power supply 0V. If the selected PSU has a connection between Earth-Ground and 0V the DMX outputs become Ground Referenced. Otherwise the DMX outputs are Floating. When the recommended PSU is used, DMX outputs are Floating.	

Application Diagram

The diagram below shows how railSplit dmx could be utilised in a typical application.



Operation

All six outputs provide identical copies of the received DMX512. Each output can drive an additional 32 devices.

LED Indication

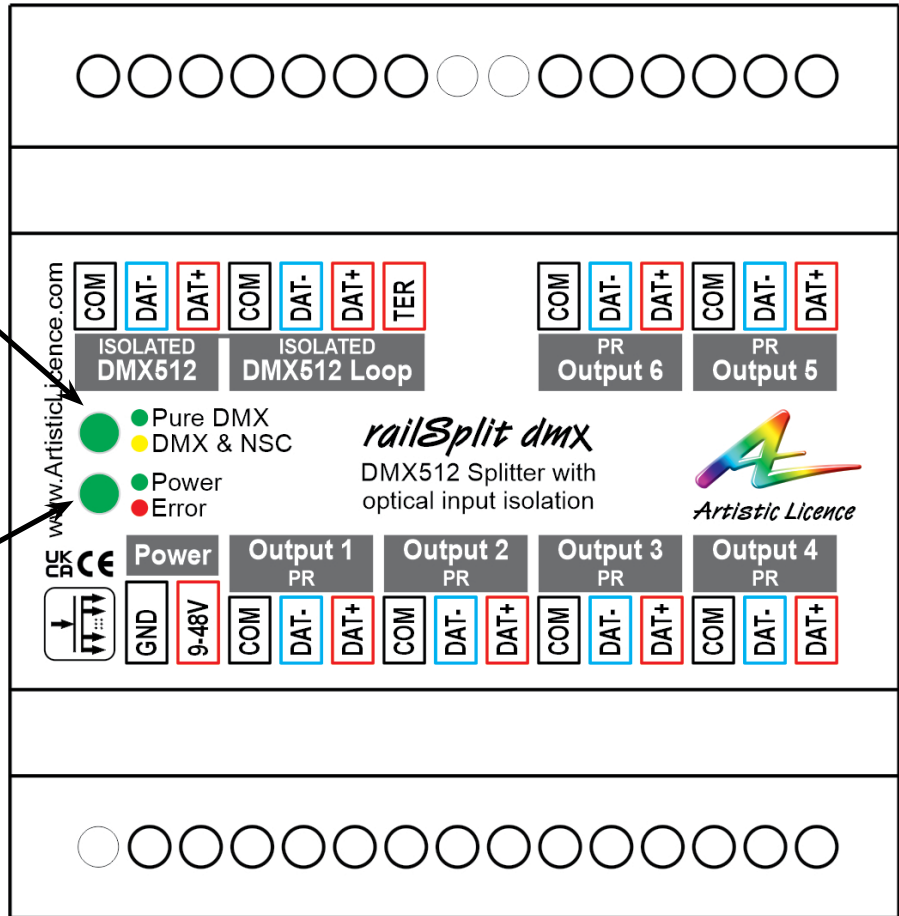
The indicators have the following meaning:

Top (Data):

- OFF = No data received
- Green = DMX activity (zero start code data only)
- Yellow = DMX activity and non-zero start code data such as RDM

Bottom (Power):

- Green = Power
- Red = Receive errors



railSplit dmx Specification

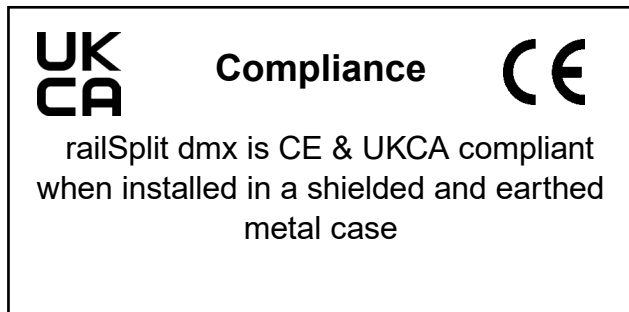
Mechanical <ul style="list-style-type: none">• Housing: DIN rail case• Material: Lexan Plastic - UL94-V0 rated• Overall dimensions: 90 mm (H) x 88 mm (W) x 62 mm (D)• Weight: 0.2 kg• Mounting: 35 mm DIN rail or surface mount• Country of manufacture: UK	DMX512 Input <ul style="list-style-type: none">• Input mode: Optically isolated• Input isolation: 1 kV• Input ESD protection: 12 kV
Environmental <ul style="list-style-type: none">• Operating temperature: 0°C to 40°C• Storage temperature: -10°C to +50°C• Operating relative humidity (max): 80% non-condensing• IP rating: IP20 indoor use only• Certification: CE, UKCA, WEEE, RoHS• Warranty: 2-year (return to base)	Control <ul style="list-style-type: none">• Input Protocols: DMX512, DMX512 (1990), DMX512-A• Output Protocols: Same as input
Power & Electrical <ul style="list-style-type: none">• Input voltage: 9-48 VDC• Input connector: 2-pin screw terminal (1 no.)• Input power (max): 8 W• Duty cycle: 100% @ 25°C• DC fuse: internal resettable fuse for control electronics	Data Connections <ul style="list-style-type: none">• 3-pin Screw Terminal DMX Input (1 no.)• 3-pin Screw Terminal DMX Loop (1 no.)• 3-pin Screw Terminal DMX Output (6 no.)
DMX512 Outputs <ul style="list-style-type: none">• Output mode: PSU referenced• Output isolation: n/a• Output ESD protection: 10 kV• Output voltage protection: +/- 10 V	LED Indication <ul style="list-style-type: none">• Power / DMX
	Package Contents <ul style="list-style-type: none">• railSplit dmx
	Ordering Info <ul style="list-style-type: none">• Product code: railSplit dmx
	Accessories (not included) <ul style="list-style-type: none">• PSU-24-0.75-FER

Compliance

All Products manufactured or sold by Artistic Licence Engineering Ltd are fully compliant with the appropriate CE, UKCA, and RoHS regulations. Product specific information is available on request.

Waste Electrical & Electronic Equipment (WEEE)

Artistic Licence is a member of a WEEE compliance scheme and will happily recycle any of our products that you, at your expense, return to us.



Warranty

All products are covered from date of purchase by a two-year return to base warranty.

By return to base, we mean that the customer is responsible for all costs of transport to and from Artistic Licence.

Returns will not be accepted without prior authorisation. In order to discuss a request to return goods, please email:

Sales@ArtisticLicence.com

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