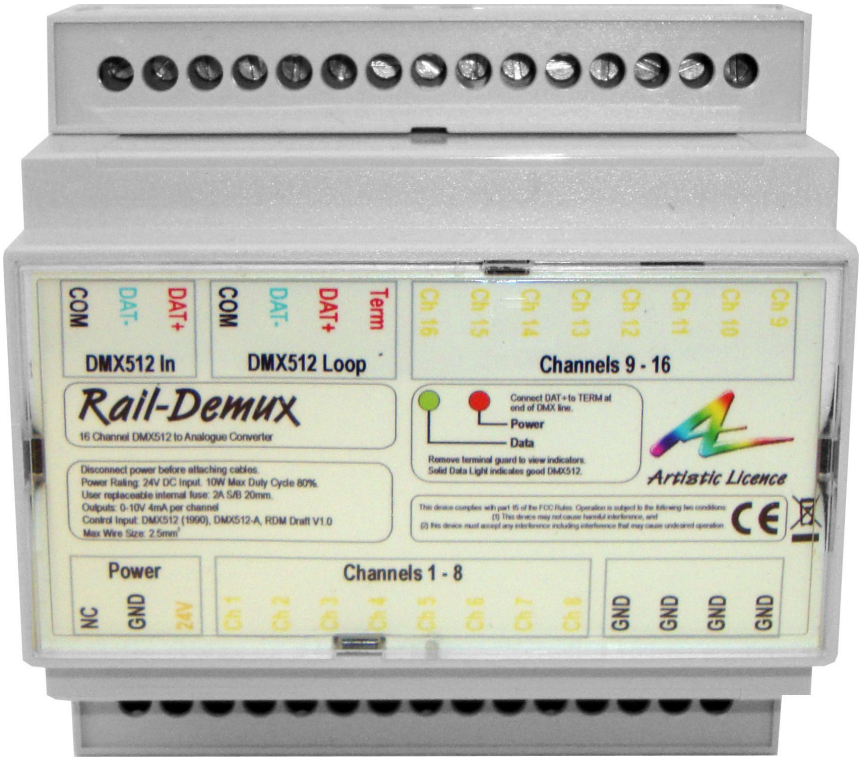
Artistic Licence



Rail-Demux

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.

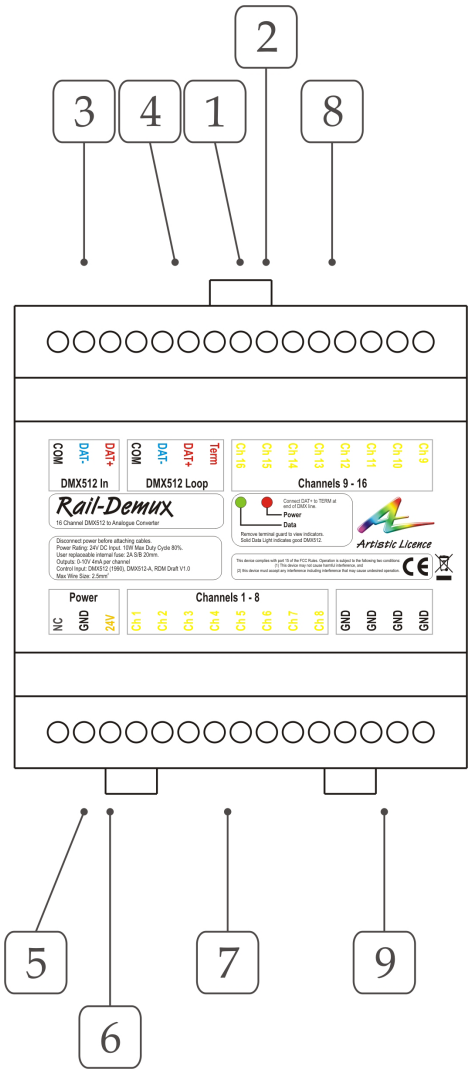
Always disconnect from the power supply when not in use.

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.

Download the user guide by scanning the following QR code:

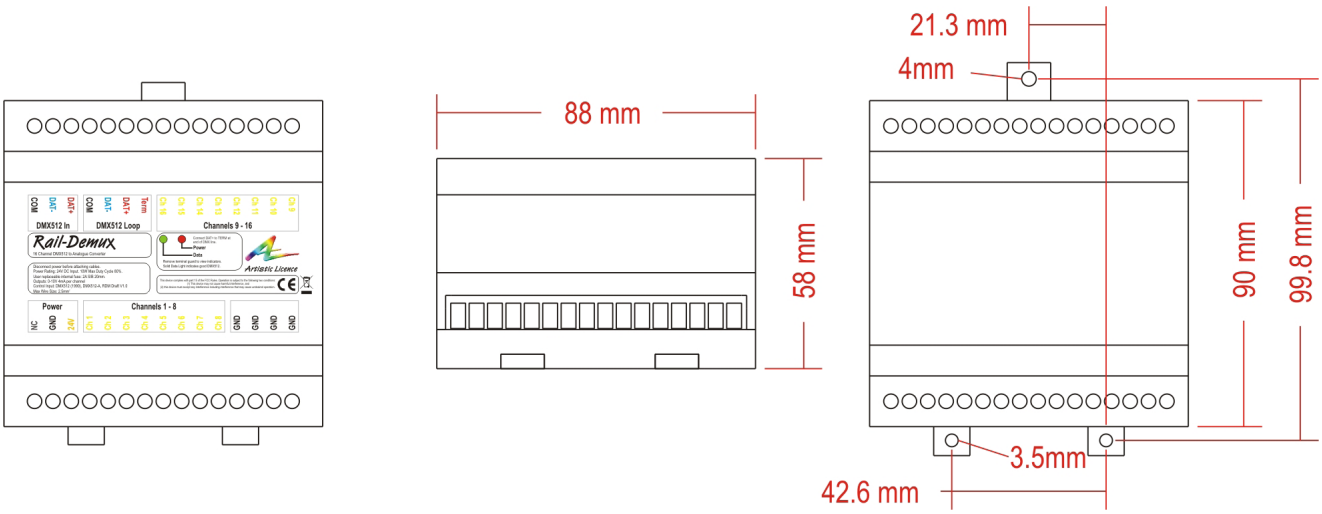
Connections



Reference	Type	Description
1	LED	Data indicator
2	LED	Power indicator
3	Connection	DMX512 Input
4	Connection	DMX512 Loop & Term**
5	Power input	Ground
6	Power input	24 VDC
7 - 8	Connection	Analogue outputs
9	Connection	Ground (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



To use the surface mount option push the three bottom tabs out until they click into place. We recommend using an M4 Pan head screw.

DMX512 Wiring

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

Internal Earth and Isolation

Circuit	Description	
DMX512 Input (including Loop through)	Type:	Non-isolated
	Pin 1:	Connects to Internal Logic Ground
Analogue Output	Ground referenced	
Internal Logic Ground	Connects to Ground Power Input	

Overview

Rail-Demux is a DIN-rail or surace mounted device that converts DMX512 into 16 analogue outputs. The standard that defines the output is ANSI E1.3 - 2001 (R2016).

DMX512 to analogue conversion has two key applications: upgrading older analogue dimmers and driving fluorescent ballasts fitted with a 0-10V control facility.

The control interface uses DMX512 (all standards) and RDM or Remote Device Management. The RDM interface allows the start address to be set by the controller over the DMX512 cable. RDM also allows the product to receive firmware upgrades and run diagnostics tests.

In the event that the controller does not support RDM, the Artistic Licence product Jump-Start can be used to set the start address.

DMX512 loop-through and termination options are provided. The product is powered via an external DC power supply unit.

Summary of Key Features

- 16 Analogue outputs ANSI E1.3 - 2001 (R2016)
- 0 - 10 VDC output
- DMX512 Interface
- RDM V1.0 (E1.20 - 2010)
- DIN rail mount
- Surface mount

Operation

To adjust or calibrate the output of the Rail-Demux, use the following procedure:

1. Disconnect the power supply.
2. Gently remove the lid of the DIN rail unit.
3. Locate the calibration resistor (RV1). This will allow you to decrease or increase the output voltage range.
4. Replace lid and reconnect to the power supply.

Ensure that you are grounded before touching any internal components. You can achieve this by either wearing an anti-static wristband or by touching an earthed metal surface at regular intervals.

Power

Rail-Demux is be powered from an external DC power supply (24 VDC). It is recommended that a ferrite core be fitted onto the DC power lines as close as possible to the Rail-Demux. This protects the unit from any electrical spikes that appear on the DC line.

LED Indication

Rail-Demux has LED indicators under the terminal guard for data in (green) and power (red).

Connections

Please refer to the connections diagram.

DMX512 Input & Loop-Through

The DMX512 input is via a 3-pin screw terminal.

A 4-pin screw terminal passive loop-through connection allows onward connection to other DMX512 devices. This enables two or more Rail-Demux units to be connected in parallel to increase the number of outputs.

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+).

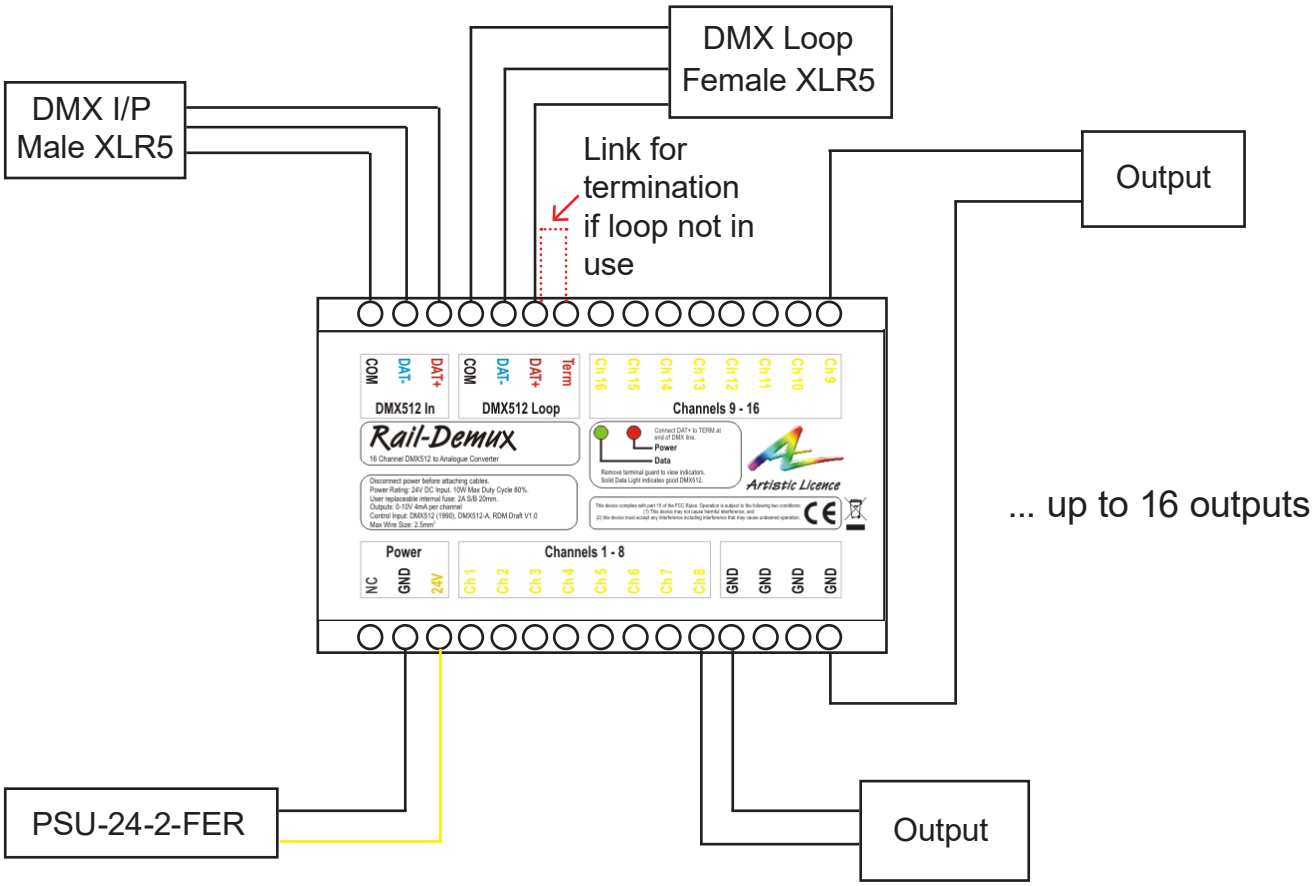
Analogue Outputs

Two 8-pin screw terminals are used for the 16 analogue outputs. The standard that defines the output is ANSI E1.3 - 2001 (R2016).

Output Ground

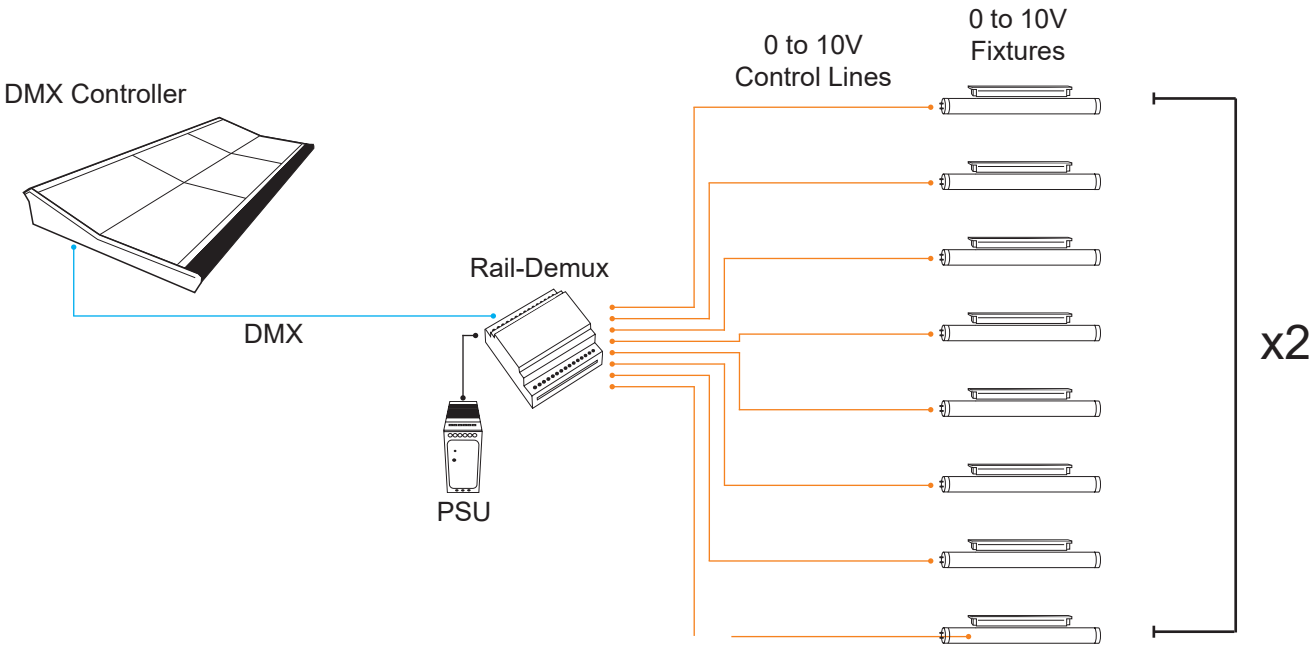
One 4-pin screw terminal is used for the ground connection. Multiple control ground wires can be connected to each of the terminals.

Wiring Diagram



Application Diagram

The diagram below shows how Rail-Demux could be utilised in a typical application. In this example, it enables dimming of 16 fluorescent ballasts by a DMX controller.



Rail-Demux Specification

Mechanical

- Housing: DIN Rail Case
- Material: Lexan plastic, UL94-V0 rated
- Overall dimensions: 90 mm (H) x 88 mm (W) x 58 mm (D)
- Weight: 0.2 kg
- Mounting: 35 mm DIN Rail or Surface Mount
- Country of manufacture: UK

Environmental

- 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, WEEE, RoHS
- Warranty: 2-year (return to base)

Power & Electrical

- Input voltage: 24 VDC
- Input power (max): 15 W
- Input connector: 2-pin screw terminal (1 no.)
- Duty cycle: 100% @ 25°C
- DC fuse: internal resettable fuse for control electronics

DMX512 input

- Protocols: DMX512, DMX512(1990), DMX512-A, RDM V1.0 (E1.20 - 2010)
- Input mode: non-isolated
- Input ESD protection: 12 kV
- 3-pin Screw Terminal DMX Input (1 no.)
- 4-pin Screw Terminal DMX Loop / Term (1 no.)

Analogue Outputs

- Voltage: Adjustable 0 - 11 VDC
- Current (max): 4 mA
- ANSI E1.3 - 2001 (R2016)
- Signal connector: 8-pin screw terminal (2 no.)
- Ground connector: 4-pin screw terminal (1 no.)

Configuration

- Start address (via RDM)

LED Indication

- Power / DMX input

Package Contents

- Rail-Demux
- User guide

Ordering Info

- Product code: Rail-Demux

Accessories (not included)

- PSU-24-2-FER

Compliance

All Products manufactured or sold by Artistic Licence Engineering Ltd are fully compliant with the appropriate CE 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.

CE Compliance CE

Rail-Demux is CE compliant when installed in a shielded and earthed metal case

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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