

Rail-Split RDM User Guide

(Version 2)

Rail-Split RDM is a fully bi-directional DMX512 splitter and distribution amplifier.

Key Features include:

- ❑ Input Optical Isolation
- ❑ Six independent outputs
- ❑ Bi-directional outputs
- ❑ RDM (Remote Device Management Draft V1.0)
- ❑ DMX512-A compatible
- ❑ Microprocessor controlled
- ❑ Surface mount or DIN rail mounted
- ❑ Support for High End System talkback protocol

Specification:

Input Voltage: 5V DC
Maximum Current: 1.5 A
Internal Fuse: 2A Slow Blow 20mm
Duty Cycle: 80%
Dimensions: W:88 H:90 D:58mm
Mounting: DIN Rail or surface mount
IP: Indoor use only
Listings: CE, FCC
Max Wire Size: 2.5mm²

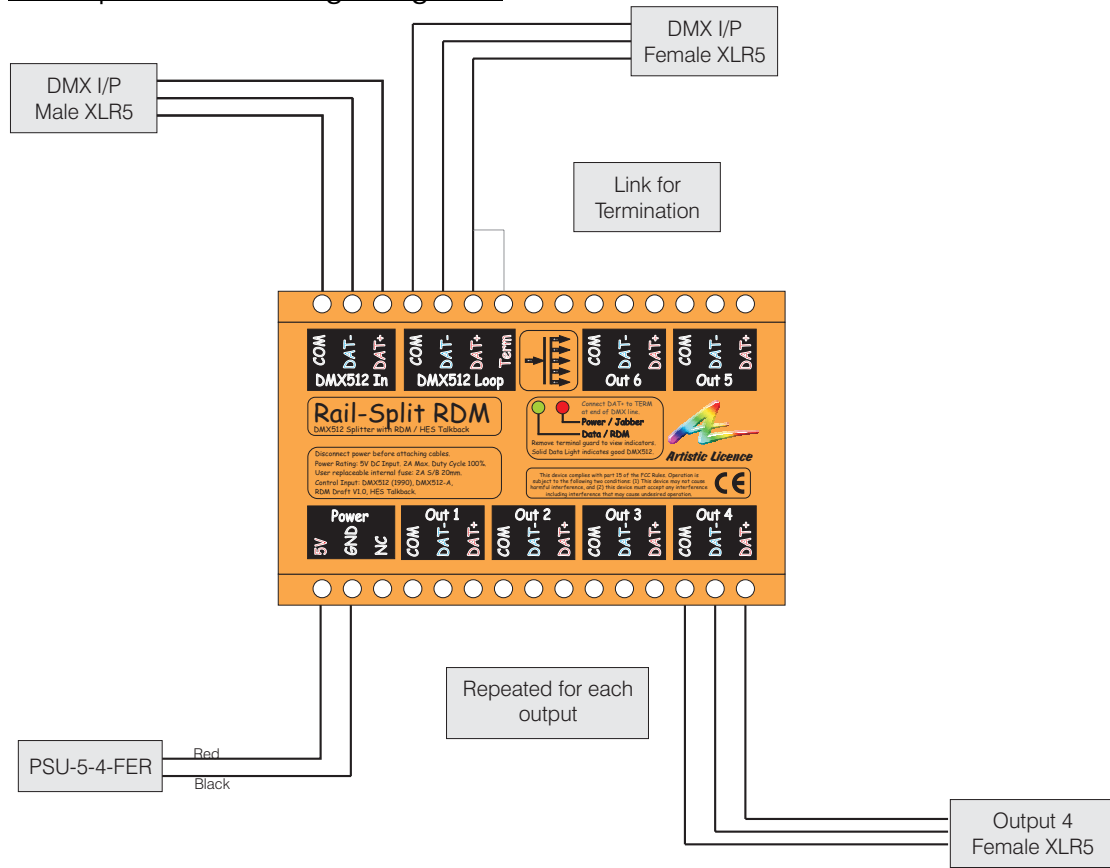
Power Supply Options: (order separately)

PSU-5-4-FER
Output: 5V 4A
Input: Auto-sensing
Max Rail-Splits: 2
Listing: CE / FCC / UL / PSE

PSU-5-10-FER
Output: 5V 10A
Input: Auto-sensing
Max Rail-Splits: 5
Listing: CE / FCC / UL / PSE



Rail-Split RDM Wiring Diagram:

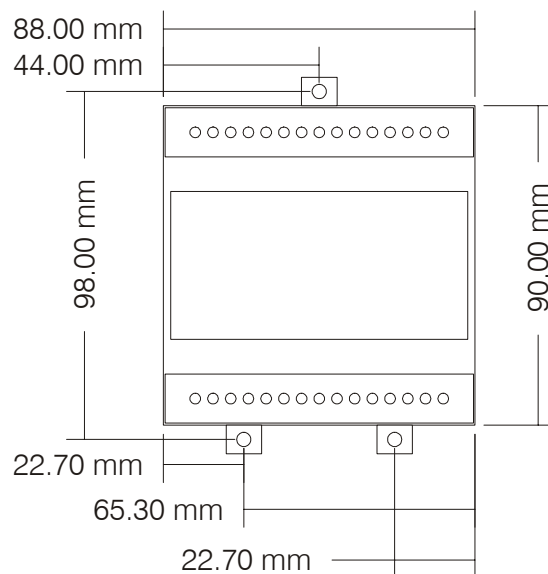


DMX512 Wiring:

XLR Pin	Function	Colour
1	Ground	Black
2	Data -	Blue
3	Data +	Red
4	No Connection	
5	No Connection	

DIN Rail Surface Mounting:

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.



Input:

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

Loop Through:

A passive Loop Through connection allows onward connection to other DMX512 devices. If this feature is not required a wire link must be fitted to the correct screw terminals that will terminate the DMX line. Please refer to the wiring diagram.

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.

Indicators:

Two dual colour indicators are provided:

1. Data:

- ❑ Green: Indicates that DMX512 is being transmitted by the outputs.
- ❑ Red: Indicates that RDM data received by one of the outputs is being returned to the controller.

2. Power:

- ❑ Red: Indicates good power and normal operation.
- ❑ Flashing: Indicates that a connected RDM device is jabbering (returning unwanted data continuously).

System Connection:

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:	Grounded.
	Pin 1:	Connected to Internal Logic Ground.
Internal Logic Ground	Connects to Ground Power Input	

The DIN Rail Range:

- ❑ Rail-Split RDM – A fully bi-directional six channel DMX512 splitter and distribution amplifier
- ❑ Rail-Pipe – A six channel intelligent power supply / low voltage dimmer
- ❑ Rail-Switch – Provides six mains voltage relays with DMX512 and RDM Draft V1.0 support
- ❑ Rail-Demux – Provides 16 DMX512 to analogue outputs and RDM Draft V1.0 support
- ❑ Rail-Tran – Provides six Darlington transistor outputs, operation to 50V DC at 450mA, product total 750mA
- ❑ Pixi-Power SB1 – A power and data controller for Pixi-Bulb and Pixi-Strip
- ❑ Rail-DALI – A 256 channel bi-directional DMX / DALI interface

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