

Rail-Switch User Guide

(Version 4.5)

In theatre, touring and architectural applications there are invariably some devices that do not provide a useful form of remote control. Rail-Switch is an elegant solution to the automation of these devices. Housed in a high impact DIN Rail mounting case, Rail-Switch provides six mains voltage relays with DMX512 and RDM (Remote Device Management) Draft V1.0 support.

The control interface is DMX512 (all standards) and RDM (Remote Device Management) Draft V1.0. All parameters including start address are set using RDM. This can be done using any of the following products: Jump-Start & Net-Lynx O/P or Ether-Lynx via an Art-Net network. For more information see App Note 36 & 39 at www.ArtisticLicence.com

Specification:

Input Voltage:	9V - 24V DC
Internal Fuse:	500mA Electronic Fuse
Duty Cycle:	80%
Relay Specs:	240VAC 8A Maximum - non-inductive <i>(please see safety warning)</i>
Dimensions:	W:88 H:90 D:58mm
Mounting:	DIN Rail or surface mount
IP:	Indoor use only
Listings:	CE, FCC
Max Wire Size:	2.5mm ²

Power Supply Options: (order separately)

PSU-9-1.5-FER	
Output:	9V 1.5A
Input:	Auto-sensing
Max Rail-Splits:	1
Listing:	CE / FCC / UL / PSE

PSU-24-2-DR	
Output:	24V 2A
Input:	Auto-sensing
Max Rail-Splits:	2
Listing:	CE / FCC / UL / PSE



Please read safety warning before using this unit.

Please note: This product uses electromechanical relays with a maximum contact rating of 8A when used at 230V AC supply. The relays are not designed to drive loads with high inrush current or high inductance. Attempting to connect loads of this type will damage the relays and could cause them to short.

Relay contacts require external fusing.

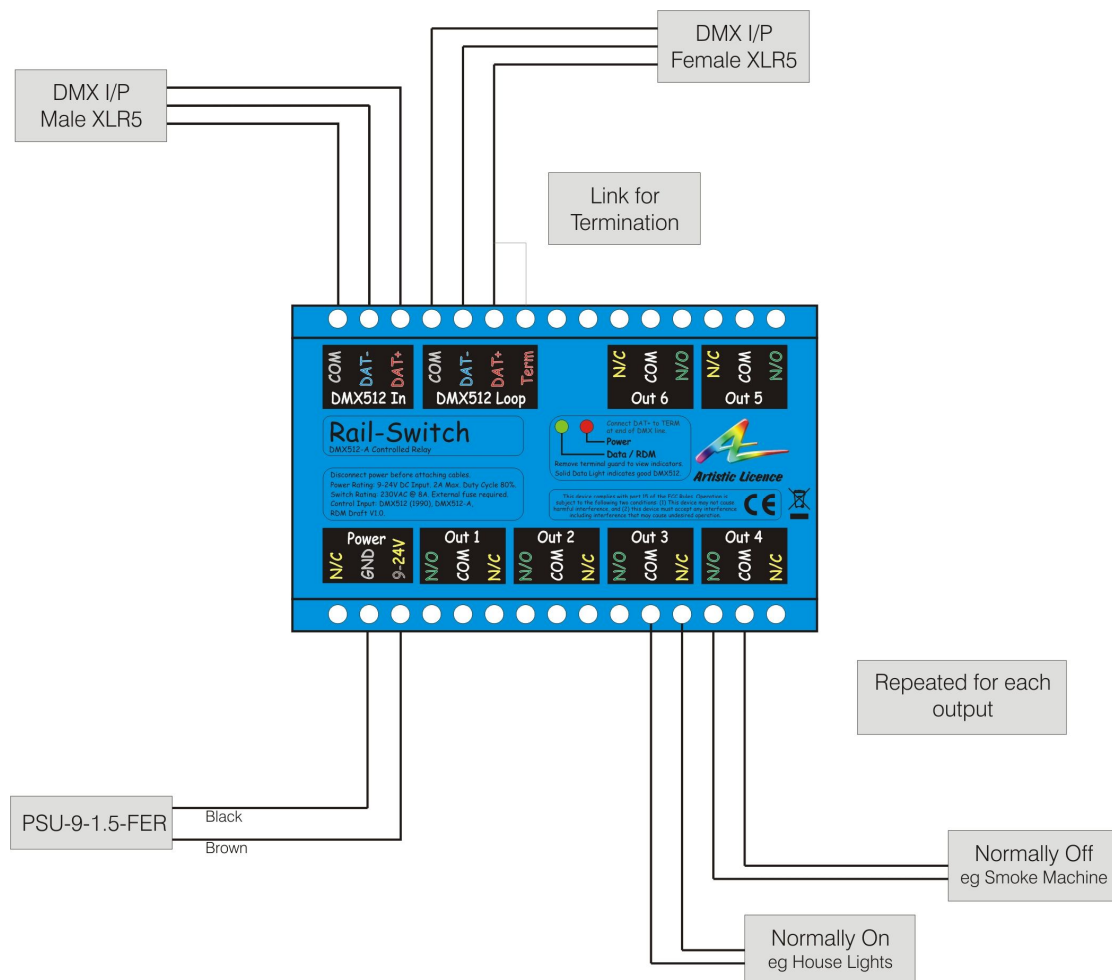
Rail-Switch Operation:

Rail-Switch uses six DMX channels, one channel for each relay. A relay is energised when the level of the relevant DMX512 channel exceeds 50%

There are three terminals for each relay; a common, normally open & normally closed.

- Normally Open: Not connected to common unless the DMX channel goes above 50%
- Normally Closed: Connected to common unless the DMX channel goes above 50%

Rail-Switch Wiring Diagram:



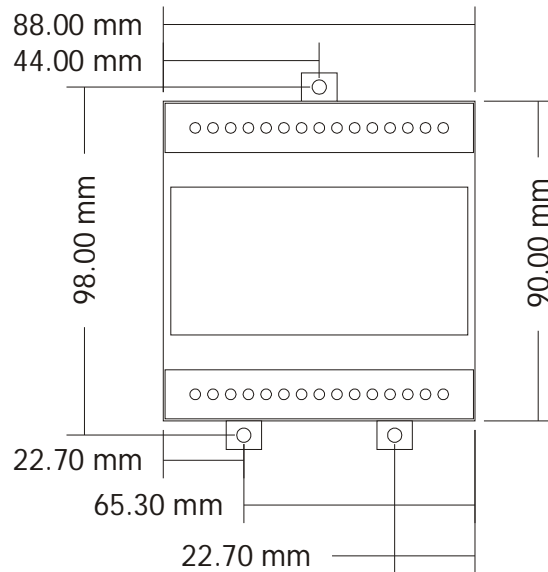
Note: It is recommended that wires from the PSU to the Rail-Switch have a ferrite core, or similar suppression device, fitted. This should be located close to the Rail-Switch. It is also recommended that the output wires are fitted with separate ferrite cores when driving a high current load.

DMX512 Wiring:

XLR Pin (Convention)	Rail-Switch Terminals	Function	Colour
1	GND	Ground	Black
2	DAT-	Data -	Blue
3	DAT+	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.



Safety Warning:

When Rail-Switch is used for high current or voltages the unit shall be placed within a locked enclosure and shall be connected to the power by a qualified electrician.

All relay connections that are used with high current or voltages shall be externally fused.

This unit has not been designed for domestic use. Proper safety precautions need to be followed when using dangerous voltage or current levels.

CE Compliance



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

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
- ❑ Rail-DALI - A 256 channel bi-directional DMX / DALI interface
- ❑ Rail-Patch - A DIN Rail mounted patch panel for a 5pin XLR to screw terminal connection
- ❑ Rail-PSU-D4 - A four circuit DALI Bus PSU
- ❑ CP12 - An LED dimmer designed to control high power LED devices
- ❑ Net-Pipe - A high power Ethernet controlled LED dimmer

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