5-Way DMX/RDM Rackmount Data Splitter

Engineer and Consultant Specifications V1.03

General Description

The MDR DMX/RDM Data Distribution Splitter and Amplifier (the Product) shall be an electronic device capable of providing five individual DMX512-A and/or RDM compatible signal outputs from a single DMX512-A and/or RDM compatible signal input. The Product shall also be capable of operating in an identical manner to the EIA485 communications protocol. The Product shall split and amplify the incoming signal to the five outputs without any distortion or noticeable delay. The input receiving circuit shall provide a “loop-thru” connection for continuation of the main DMX512-A or RDM compatible data stream. All connectors shall be 5-pin XLR type.

The Product shall have a push-button termination switch, user-selectable for terminating the input by means of a 120 ohm resistor across pins 2 and 3 of the input connector. Each output must be electrically isolated from the input and all other outputs via means of optocouplers providing a galvanic isolation barrier of no less than 1500V. All output circuits are to be short-circuit protected and filtered to approved EMI standards.

Power Requirements

The Product shall have an integral universal power supply to operate within the range of 85-264V AC with a frequency band of 47-63Hz contained within the metal chassis. The Product shall run continuously whilst mains is connected. Products with separate external power supplies and mains on/off switches will not be accepted.

Control Requirements

5-pin XLR in, thru and output connectors shall be provided on the front panel to allow remote control of the Product by any of the following control signals: DMX512 (1990), DMX512-A (E1-11) and RDM (E1-20).

Standard Features

The Product shall provide, but not be limited to the following:

- DMX512 (1990), DMX512-A (E1-11) and RDM (E1 -20) via front-panel 5-pin XLR in, thru and output connectors
- Inputs galvanically isolated from outputs to 1500V
- All outputs galvanically isolated from each other, EMI-filtered and current-limited to protect against short circuits
- Inbuilt RDM capability to convert all inputs and outputs to run RDM protocols

- Fully compliant with CE and RCM regulations
- RDM enable switch to enable RDM data to pass through the unit
- Indicator LEDs for power, DMX and RDM activity
- DMX termination switch for input on front panel
- Universal voltage/frequency mains power supply

Construction

The Product shall be designed for use with 19" racking systems, flight cases and open portable frames.

The chassis must be constructed from zinc-coated steel and finished in durable powder-coat paint. Overall dimensions must not exceed 484mm wide by 110mm deep by 45mm high and 1.5kg in weight.

The front panel shall contain the XLR input, thru and the five output connectors, status indicators and switches. The chassis must allow the field-upgradeable expansion to 10 output circuits by the simple inclusion of a 5-way output PCB kit.

Insert appropriate rear connector option:

The rear panel shall house the IEC power input connector.

The Product shall be a MDR DMX/RDM Data Splitter from LSC Control Systems, model number MDRR/R.

The rear panel shall house the Neutrik powerCON power input connector.

The Product shall be a MDR DMX/RDM Data Splitter from LSC Control Systems, model number MDRR/R/P.