eDIN #481x DMX Installation Repeater Specifications

Version 2.1
July 2013

SUBJECT TO CHANGE WITHOUT NOTICE

1.0 General

1.1 The eDIN DMX/RDM Installation Repeater shall be a factory-assembled, pre-wired, contractor-ready wall mounted panel.

1.2 The Installation Repeater shall permit star-wiring of DMX512 and RDM lighting control data signals and shall isolate and protect DMX transmitters and DMX receivers from high common mode voltages, ground loop currents and other potentially damaging electrical faults.

1.3 The Installation Repeater shall have one (two, three) input port(s) and four (eight, twelve) output ports. All ports shall be bi-directional.

1.4 There shall be no in-line processing of the input signal to ensure that the output signals are all exact duplicates of the input signal.

1.5 DMX and RDM signal isolating/splitting shall be accomplished using standard 4-way DIN-rail mounted modules (Pathway Model #1009) for easy expansion and/or servicing.

1.6 The system shall be capable of repeating and distributing simplex protocols other than DMX512, provided they meet the electrical requirements of EIA-RS422 or RS485.

2.0 Features

2.1 Each 4-way DMX/RDM repeater module shall incorporate LED indicators for DC power input, CPU status, isolated DC power, DMX input, and output data for each port.

2.2 Each module shall be capable of regenerating four (4) exact duplicate data streams from the original source input data stream.

2.3 Each regenerated data stream shall have the same characteristics and capabilities as the input data stream.

2.4 It shall be possible to daisy-chain all modules on the same DMX universe or connect separate universes to each module.

2.5 One (1) DMX/RDM pass-thru port shall be provided on each repeater module. The pass-thru port shall be active, i.e. electrically repeated. If RDM Up to four (4) DMX/RDM repeater modules may be cascaded together using their pass-thru ports.

2.6 In DMX-only installations, up to eight (8) modules may be cascaded (daisy-chained) on the same DMX input data line using the pass-thru port or any output port.

2.6 Each output shall be capable of driving up to 32 DMX-only receiving devices over a maximum 500-meter (1600-ft.) length of cable.

2.7 Each output shall be capable of driving up to 31 DMX/RDM responding devices over a maximum 300-meter (1000-ft.) length of cable.

2.8 Each repeater module shall act as an RDM responder.

2.9 It shall be possible to field-update each module's firmware via the DMX input port.

3.0 Electrical

3.1 The power supply shall be a DIN-rail mounted, field-replaceable, wide-range input (115/240VAC, 50/60 Hz), UL-listed switching power supply, sized according to the maximum number of modules the cabinet can accommodate.

3.2 There shall be 2500-volt electrical isolation between input and output sections of the supply.

3.3 All DMX input and output ports shall be capable of withstanding short-term application of up to 250V without damage to internal components.

3.4 Port protection shall be of the self-healing type, rated for 250V. Replaceable fuses shall not be acceptable.
3.5 The DMX input port shall provide 1500-volt optical isolation between the input signal wiring and output signal wiring.
3.6 DMX/RDM output ports shall be fully optically isolated from each other and floating with respect to earth ground.
3.7 DMX outputs shall provide self-healing protection against ground loops between adjacent ports.

4.0 Physical

4.1 The DMX/RDM Installation Repeater cabinet shall be a NEMA 1 enclosure, constructed of 18 gauge sheet steel, finished in textured black powder epoxy, with a non-louvered, formed aluminum cover.
4.2 The cabinet shall be designed for surface mounting.
4.3 Dimensions shall be 10.25”w x 13.25”h x 4.5”d (260mm x 335mm x 120mm) for the four-output models, and 10.25”w x 23.25”h x 4.5”d (260mm x 510mm x 120mm) for the eight or twelve-output models.
4.4 The cabinet shall be furnished with ½” and ¾”conduit knockouts, internal high-voltage barriers as required, and be clearly labeled “Pathway eDIN System”.

5.0 Field Wiring Connections

5.1 All internal field wiring connections shall be clearly labeled according to their function.
5.2 Connections for DC power and all data input, output and pass-thru ports, shall be two-part, Phoenix-type screw terminal strips, capable of accepting #26 to #16 gauge solid or stranded wire.
5.3 A DMX pass-thru connection shall be provided to allow daisy-chaining of additional modules, Installation Repeaters, or other DMX equipment.
5.4 AC power supply connections shall be capable of accepting up to #12 gauge solid or stranded wire. A suitable terminal shall be provided for ground wire connection.

6.0 Environmental

6.1 The ambient operating temperature shall be -10° to 50°C (14° to 122°F).
6.2 The storage temperature shall be -40° to 70°C (-40° to 158°F).
6.3 The operating humidity shall be 5% - 95% non-condensing.

7.0 Compliance

7.1 The DMX/RDM Installation Repeater shall meet the requirements of ANSI E1.11 DMX512-A and USITT DMX512 (1990).
7.2 The Installation Repeater shall be ETL-listed.
7.3 The Installation Repeater shall be compliant with the EU RoHS 2002/95/EC directive.
7.4 The Installation Repeater shall conform to FCC requirements.
7.5 The repeater module(s) shall be a Class 2 Low Voltage device(s).

8.0 Acceptable Product

8.1 The 4-Way DMX/RDM Installation Repeater(s) shall be Pathway eDIN model #4813.
8.2 The 8-Way DMX/RDM Installation Repeater(s) shall be Pathway eDIN model #4814.
8.3 The 12-Way DMX/RDM Installation Repeater(s) shall be Pathway eDIN model #4815.

Pathway Connectivity
Acuity Brands Lighting Canada Inc.
103 - 1439 17th Avenue SE
Calgary AB Canada T2G 1J9
403 243 8110 fax 403 287 1281
www.pathwayconnect.com

Pathway Connectivity
Acuity Brands Lighting Canada Inc.
103 - 1439 17th Avenue SE
Calgary AB Canada T2G 1J9
403 243 8110 fax 403 287 1281
www.pathwayconnect.com