OVERVIEW

The Pathway DIN 8-port RDM Hub (PWREP DIN P8 RDMHUB) brings flexibility to single universe DMX512 distribution systems.

Through the use of automatic DMX512 sensing across four operating modes, any port may detect a roving DMX512 source and act as an input; two inputs may be merged together; the user may select between inputs; or a priority scheme may be invoked.

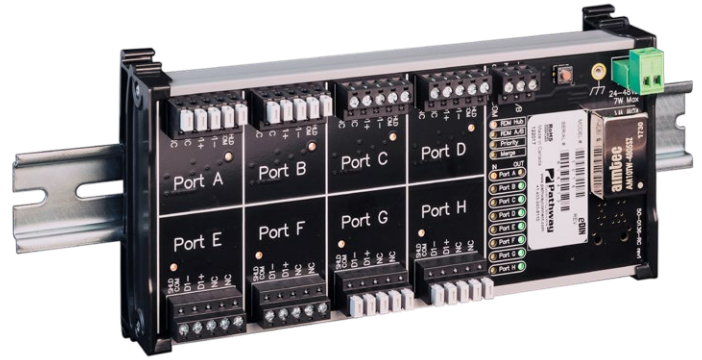**The module is RDM discoverable and configurable, as well as daisy-chainable.**

CONNECTIONS

The PWREP DIN P8 RDMHUB DMX/RDM Hub features terminal strips that can be removed from the card to facilitate easy wiring installation or replacement. Make the following connections, ***WITH THE POWER TURNED OFF***.

POWER

The PWREP DIN P8 RDMHUB will operate on a range of voltages from 24-48 volts DC, with a maximum power consumption of 7 Watts. Observe the correct polarity when wiring the power IN terminal plug. The earth ground terminal must be connected to the enclosure's chassis or electrical ground terminal to improve EMC compliance.

DMX512

DMX512 (DMX) connections consist of a shield and data pair. Connect DATA+ and DATA- to D1+ and D1-. Observe the same polarity convention throughout the system. Connect the cable shield or common wire to the SHLD COM terminal.

DMX TERMINATE

Each port on the PWREP DIN P8 RDMHUB is auto-terminated as required by its operation.

STATUS INDICATORS

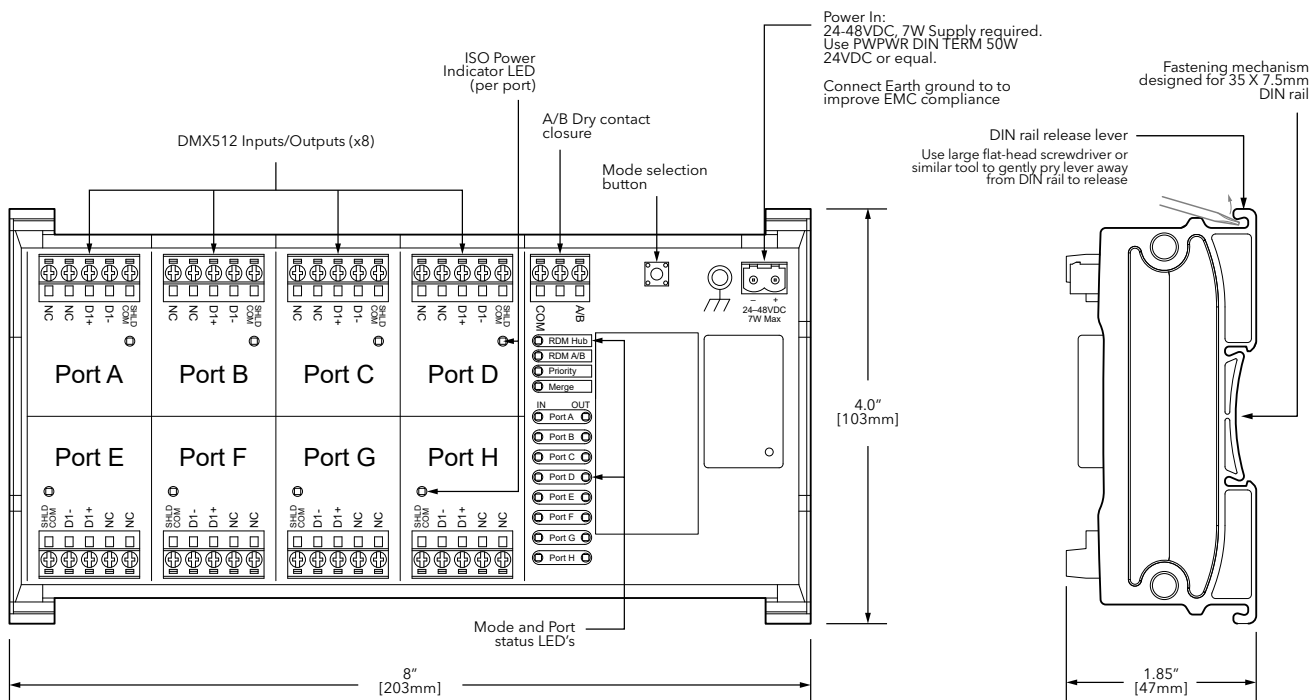|	
PORT LEDs	*Amber*. Steady glow indicates each port's isolated power supply is OK; off indicates no power. If all LEDs are off, check that the module is receiving power.
INPUT	*Amber*. Steady glow indicates port latched to active DMX source. Input and Output off on all ports indicates no DMX source.
OUTPUT	*Green*. Steady glow indicates port is transmitting DMX. Input and Output off on all ports indicates no DMX source.
FUNCTION	*Amber*. Steady glow indicates the current operating mode. Flashing indicates the module is in edit mode.

CONFIGURATION

To configure, press and hold the Mode selection button until the current Function LED begins to flash. Momentarily release and then press the button again to cycle through the operating mode options. Once the desired mode is selected, release the button. After three seconds, the LED will change to a steady glow and the new mode will take effect.

Power In:
24-48VDC, 7W Supply required.
Use PWPWR DIN TERM 50W 24VDC or equal.

Connect Earth ground to to improve EMC compliance

ISO Power Indicator LED (per port)

DMX512 Inputs/Outputs (x8)

A/B Dry contact closure

Mode selection button

Fastening mechanism designed for 35 X 7.5mm DIN rail

DIN rail release lever

Use large flat-head screwdriver or similar tool to gently pry lever away from DIN rail to release

Mode and Port status LED's

4.0" [103mm]

8" [203mm]

1.85" [47mm]

08/27/21

OPERATING MODE: RDM HUB

Detects and latches to a DMX input applied to any port. Ideal when a single console or controller is moved between multiple locations in a venue.

All DMX lines are wired back to the PWREP DIN P8 RDMHUB DMX/RDM Hub. When no DMX is present, the Hub will scan all ports looking for an input signal. Once a DMX input is detected, that port becomes the input and the other ports become DMX outputs. If a second DMX source is applied to another port, that source will be ignored until the initial source is disconnected.

While in RDM Hub mode, the PWREP DIN P8 RDMHUB acts as an RDM responder and splitter. Any connected downstream RDM devices may be discovered and configured using an RDM-enabled console or other RDM controller.

OPERATING MODE: RDM A/B

Allows the user to select input on Port B over Port A, using a maintained dry contact closure between COM (pin 3) and A/B (pin 1) of the three-position contact closure terminal block. Ideal for selecting a backup console over the primary console or source, on the fly.

Ports A and B are wired to DMX sources. All other ports are outputs. With no connection between COM and A/B, input signal on Port A will be output, and any input on Port B will be ignored. When a dry contact is closed and maintained between COM and A/B, input signal on Port B will be output and any input on Port A will be ignored. The switch between sources is immediate.

NOTE: If there is no DMX signal on the selected input port, no DMX will be output by the card.

While in RDM A/B mode, the PWREP DIN P8 RDMHUB acts as an RDM responder and splitter. Any connected downstream RDM devices may be discovered and configured using an RDM-enabled console or other RDM controller.

OPERATING MODE: PRIORITY

Provides predictable signal priority arrangements of DMX sources. Ensures a primary console will take over completely from stage management panels, architectural controllers and other data sources.

Ports are wired to DMX sources as desired, with Port A having highest priority and Port H lowest. When signal ceases on Port A (or whichever port is currently the active input), after a one second delay, the card will latch to the next lower active source and distribute this source to all other ports. Should signal return on Port A , or any other port higher than the current input, the card will immediately latch to that source and distribute the signal to all other ports.

NOTE: The DMX source must cease entirely for priority to take effect. Bringing all DMX levels to zero is not the same as the signal stopping or disconnecting.

NOTE: Do not install any DMX receiving devices between the DMX source and the PWREP DIN P8 RDMHUB when in Priority mode. Intermediate devices will not function correctly should a different DMX source have priority.

While in Priority mode, the PWREP DIN P8 RDMHUB acts as an RDM responder. However, all RDM communication with downstream devices are disabled. Any connected downstream RDM devices will not be discovered and cannot be configured.

OPERATING MODE: MERGE

Allows slot-by-slot, HTP (highest-takes-precedence) merging of two DMX sources. For example, it allows use of a remote controller while the main console is also active.

All DMX lines are wired back to the RDM Hub. With one DMX input active, the RDM Hub will scan the remaining ports looking for an additional input signal. When found, the Hub will latch to the second signal and begin merging the two sources. When the secondary source ceases, merging will stop and the card will begin scanning again.

NOTE: Should more than two DMX inputs be active, the sources actually merged will be determined using the Priority Mode order-of-precedence.

While in Merge mode, the PWREP DIN P8 RDMHUB acts as an RDM responder. However, all RDM communication with downstream devices are disabled. Any connected downstream RDM devices will not be discovered and cannot be configured.

RDM PROPERTIES

The PWREP DIN P8 RDMHUB DMX/RDM Hub is fully compliant with the E1.20 Remote Device Management standard. Operating modes may also be set remotely using an RDM-enabled console or other RDM controller.

The PWREP DIN P8 RDMHUB has two custom properties, which may only be set using an RDM-enabled console or other RDM controller.

Hold Last Look: On loss of all DMX inputs, output may be held for zero seconds, thirty seconds, 1 minute, 5 minutes or forever. Default is zero seconds.

DMX512 Output Speed: The DMX output frame rate may be set to: Slow, Medium or Fast. Default is Fast.

ELECTRICAL INFORMATION

- Input operating voltage: 24-48 VDC
- 7W power consumption
- 3000V isolation between DMX data links (1500V from any DMX port and DC input)
- 60V fault protection on input and output ports

PHYISCAL

- 0.7 lbs (0.32 kg)
- 8.0"W x 4"H x 1.85"D (203mm x 103mm x 47mm)
- Operating conditions: 14°F-113°F (-10°C-45°C), 5-95% relative humidity, non-condensing

COMPLIANCE

- ANSI E.1.11 DMX512-A R2013
- ANSI E1.20 RDM - Remote Device Management
- RoHS 2011/65/EU + A1 2015/863
- CE