

PWREP DIN P3 RDMHUB DMX/RDM Merger

Manual

OVERVIEW

The PWREP DIN P3 RDMHUB DMX/RDM Merger allows merging and switching between two DMX sources in a one universe system.

Through the use of automatic DMX512 sensing, across four operating modes, any port may detect a roving DMX512 source and act as an input while the other two Port output the single; or two inputs may be merged together; or 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 P3 RDMHUB DMX/RDM Merger 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 P3 RDMHUB will operate on a range of voltages from 24-48 volts DC, with a maximum power consumption of 5 Watts. Observe the correct polarity when connecting V+ and V-. The earth ground terminal must be connected to the enclosure's chassis or electrical ground terminal to improve EMC compliance.

DMX512

DMX512 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 P3 RDMHUB is auto-terminated as required by its operation.

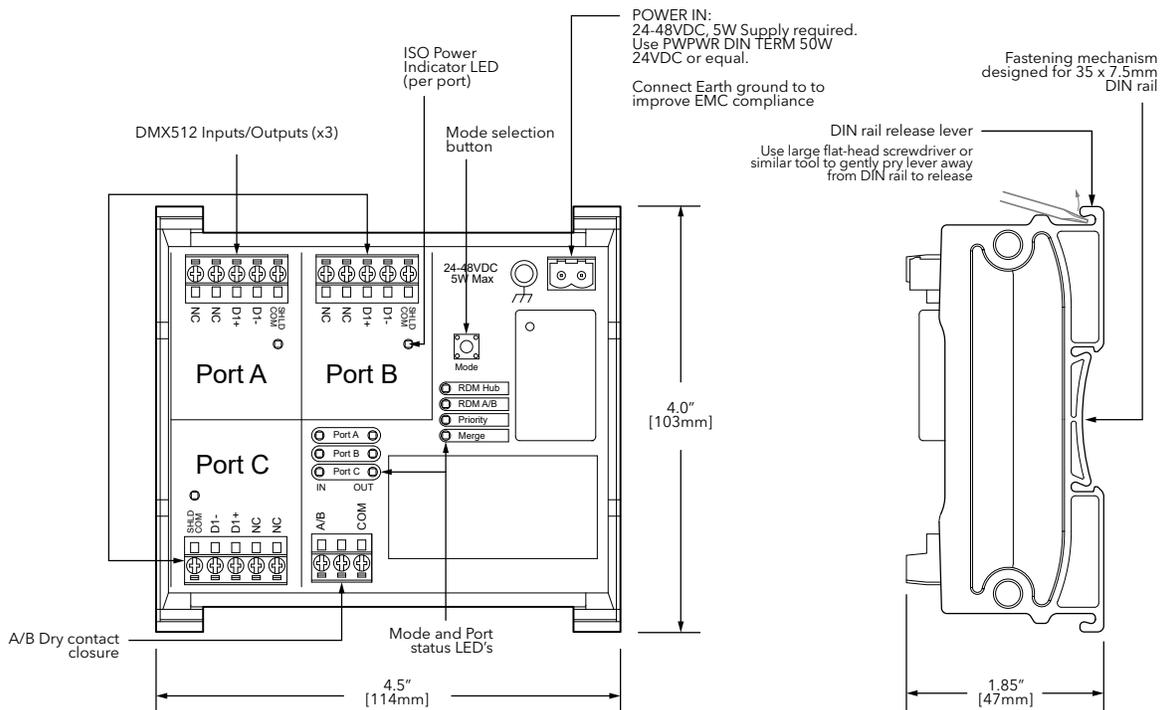


STATUS INDICATORS

- POWER** Red. 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** Red. Steady glow indicates the current operating mode. Flashing indicates the module is in edit mode.

CONFIGURATION

To configure, press and hold the function button until the current function LED begins to flash. Momentarily release and then press the button again to cycle through the operating modes. 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.



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 P3 RDMHUB DMX/RDM Merger card. When no DMX is present, the Merger will scan all ports looking for an input signal. Once a DMX input is detected, that port becomes the input and the other two 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 Merger card 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 while Port C goes to the lighting system. 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 P3 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.

Wire the theatrical console to Port A and the architectural controller to Port B.

When signal ceases on Port A, after a one second delay, the card will switch to Port B. Should signal return on Port A, the card will immediately output that signal.

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 P3 RDMHUB

card when in Priority mode. Intermediate devices will not function correctly should a different DMX source have priority.

While in Priority mode, the PWREP DIN P3 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, allows use of a remote controller while the main console is also active.

Hook one source to Port A and one to Port B and the lighting system is wired to Port C.

While in Merge mode, the PWREP DIN P3 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 P3 RDMHUB DMX/RDM Merger 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 P3 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
- 5W power consumption
- 3000V isolation between DMX data links (1500V isolation from any DMX port to DC input)
- 60V fault protection on DMX ports

PHYSICAL

- 0.3 lbs (0.12 kg)
- 4.5"W x 4"H x 1.85"D (113mm x 103mm x 47mm)
- Operating conditions: 14°F-113°F (-10°C-45°C), 5-95% relative humidity, non-condensing

COMPLIANCE

- ANSI E1.11 DMX512-A R2013
- ANSI E1.20 RDM - Remote Device Management
- RoHS 2011/65/EU + A1 2015/863
- CE