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DMX4ALL DMX-Splitter 4 RDM User Manual

Contents

DMX4ALL DMX-Splitter 4 RDM

Product Information

The DMX-Splitter 4 RDM is a compact DMX and RDM distributor that allows you to distribute a DMX input signal to four galvanically isolated outputs. Unlike regular DMX splitters, this device also passes RDM (Remote Device Management) information in both directions along with the DMX signal. It features an RDM filter that can be switched on to filter out RDM information and prevent malfunction or flickering of non-RDM-capable devices. The device can be recognized as an independent RDM device, allowing settings to be made via RDM. It is designed with extremely light DC/DC converters for galvanic isolation and can be powered by a single power supply unit within a voltage range of 8V to 24V. The operating status is indicated by three RGB LEDs, and the LED displays can be switched off via RDM command or time-controlled to avoid disturbing points of light. The DMX-Splitter 4 RDM can be mounted on a top hat rail using the DIN rail housing 700 as an accessory.

Product Usage Instructions

1. Read the user manual and warnings carefully before installation for your own safety.
2. Connect the power supply unit to the DMX-Splitter 4 RDM within the voltage range of 8V to 24V.
3. If necessary, combine multiple DMX-Splitter 4 RDM devices to achieve more than four outputs.
4. To enable the RDM filter, switch it on to filter out RDM information and prevent malfunction/flickering of non-RDM-capable devices.
5. If desired, make settings via RDM by recognizing the DMX-Splitter 4 RDM as an independent RDM device.
6. Monitor the three RGB LEDs to check the operating status of the device:
   - STATUS LED
     - **OFF GREEN:** Power supply not connected / The display is in MUTE
     - **Device ready for use:** RED GREEN BLUE
     - **Device shows RDM Identify:** RED GREEN BLUE
   - DMX LED
     - **OFF RED:** The display is in MUTE / DMX signal is not received
     - **DMX signal is received:** GREEN

- **Device shows RDM Identify:** RED GREEN BLUE
    - RDM LED
        - **OFF RED:** RDM data does not exist / The display is in MUTE
        - **RDM-Filter is switched on:** RED
7. If necessary, switch off the LED displays via RDM command or time-controlled to avoid disturbing points of light, especially on stages.

Description
The DMX-Splitter 4 RDM is a compact DMX and RDM distributor that makes a DMX input signal available again at four galvanically isolated outputs.

4 galvanically isolated outputs
The DMX-Splitter 4 RDM is a compact DMX and RDM distributor that makes a DMX input signal available again at four galvanically isolated outputs.

DMX and RDM
In contrast to pure DMX splitters, the RDM information is passed in both directions in addition to the DMX signal.

RDM filter
When the RDM filter is switched on, all RDM information are filtered out and no longer passed on to the outputs. This can prevent malfunction / flickering of non-RDM-capable devices.

Settings possible via RDM
The DMX-Splitter 4 RDM is recognized as an independent RDM device and settings can be made via RDM.

Extremely light construction
Extremely light DC/DC converters are used for galvanic isolation.

Power supply via one power supply unit
The power supply occurs via one power supply unit. The voltage range is between 8V up to 24V.

3 RGB-LEDs
Three RGB LEDs clearly indicate the current operating status.

Switchable LED displays
The LED displays on the DMX-Splitter 4 RDM can be switched off via RDM command (DISPLAY_LEVEL) or time-controlled. This is particularly helpful on stages to avoid disturbing "points of light".

Top hat rail mounting available
Suitable for the DMX-Splitter 4 RDM the DIN rail housing 700 is available as accessory.

Data Sheet

- **Power supply**: 8-24V DC
- **Power consumption:** 200mA@12V / 130mA@24V (no load)
- **Protocol:** DMX512 RDM
- **Input:** 1x DMX512 / RDM
- **Output:** 4x DMX512 / RDM galvanically isolated
- **RDM filter:** Can be switched on / off

- **Connections**: Screw terminals
- **Dimensions:** 64,2mm x 82mm

Contents

- 1x DMX-Splitter 4 RDM
- 1x Quick guide german and english

Model Overview
The different models of the DMX-Splitter series provide a different range of functions and are available in different versions.

Model	DMX-Splitter 4	DMX-Splitter 4 RDM	DMX-Splitter 4 RDM+	DMX-Splitter 6	DMX-Splitter 6+
Version	Board	Board	Mounted Device	Board	Mounted Device
Protocol	DMX512	DMX512 / RDM	DMX512 / RDM	DMX512	DMX512
Power supply	8-24V DC	8-24V DC	8-24V DC	8-24V DC	8-24V DC
Outputs	4	4	4	6	6
Touch control	✘	✘	✔	✘	✘
RDM	✘	✔	✔	✘	✘
RDM-Filter	✘	✔	✔	✘	✘
RGB Status LED	✘	✔	✔	✔	✔
RGB DMX LED	✘	✔	✔	✘	✘
RGB RDM LED	✘	✔	✔	✘	✘
Disconnectable LED Display	✘	✔	✔	✘	✘
Top hat rail mounting	✘	✘	✔	✘	✔

Connection
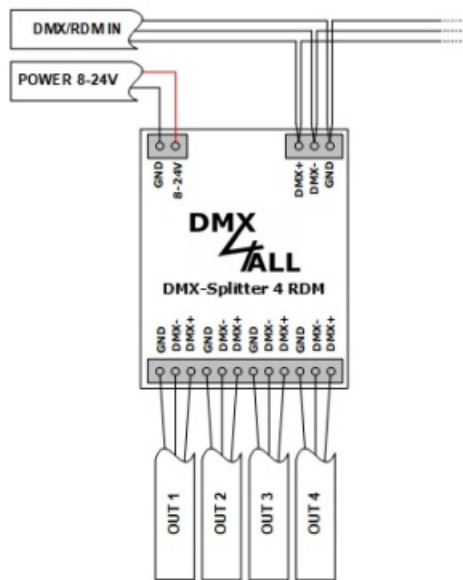
If more than 4 outputs are needed, several DMX-Splitter 4 RDM can be combined as follows:
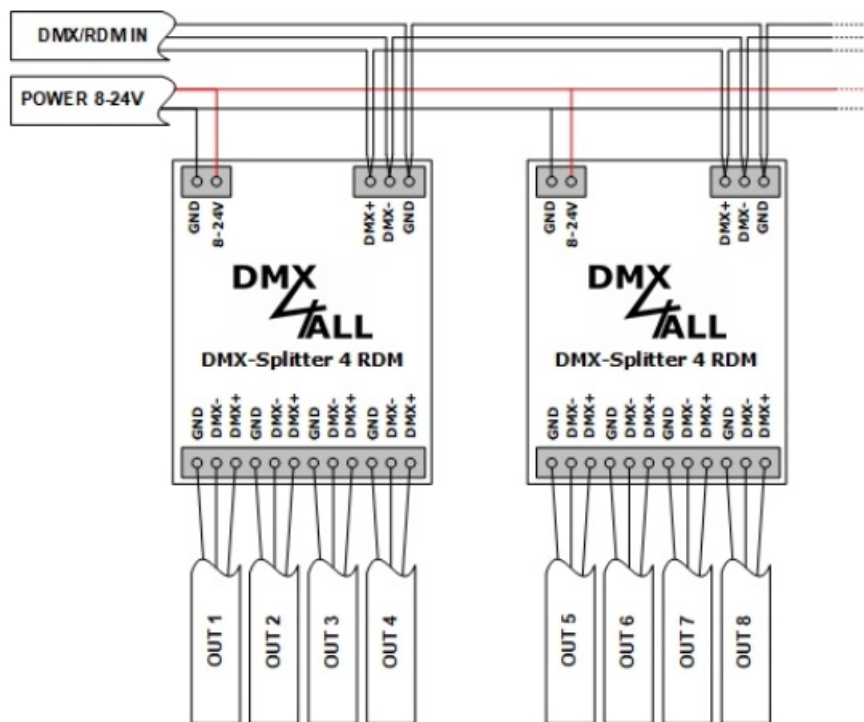
LED display
The DMX-Splitter 4 RDM has three RGB display LEDs. STATUS LED

STATUS LED

- **OFF** :Power supply not connected / The display is in MUTE
- **GREEN** :Device ready for use
- RED → GREEN → BLUE Device shows RDM Identify

DMX LED

- **OFF:** The display is in MUTE

- **RED** :DMX signal is not received
- **GREEN** :DMX signal is received
- RED → GREEN → BLUE Device shows RDM Identify

RDM LED

- **OFF** :RDM data does not exist / The display is in MUTE
- **RED :**RDM-Filter ist eingeschaltet
- **BLUE** :RDM data is available
- RED → GREEN → BLUE Device shows RDM Identify

RDM filter
When the RDM filter is switched on, all RDM information are filtered out and no longer passed on to the outputs.
This can prevent malfunction / flickering of non-RDM-capable devices.
The RDM filter can only be activated for all outputs.
The RDM filter is switched on and off by briefly pressing the RDM FILTER ENABLE / DISABLE button.
If the RDM filter is switched on, the RDM LED lights up red continuously.
If the RDM filter is switched off, the RDM LED only briefly lights up blue if RDM data is present.

RDM
RDM is the short form for Remote Device Management.
As soon as the device is within the system, device-dependent settings occur remotely via RDM command due to the uniquely assigned UID. A direct access to the device is not necessary.

This device supports the following RDM commands

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
DISC_UNIQUE_BRANCH	✔			E1.20
DISC_MUTE	✔			E1.20
DISC_UN_MUTE	✔			E1.20
DEVICE_INFO			✔	E1.20
SUPPORTED_PARAMETERS			✔	E1.20
PARAMETER_DESCRIPTION			✔	E1.20
SOFTWARE_VERSION_LABEL			✔	E1.20
DMX_START_ADDRESS		✔	✔	E1.20
DEVICE_LABEL		✔	✔	E1.20
MANUFACTURER_LABEL			✔	E1.20
DEVICE_MODEL_DESCRIPTION			✔	E1.20
IDENTIFY_DEVICE		✔	✔	E1.20
FACTORY_DEFAULTS		✔	✔	E1.20
DMX_PERSONALITY		✔	✔	E1.20
DMX_PERSONALITY_DESCRIPTION			✔	E1.20
DISPLAY_LEVEL		✔	✔	E1.20

DMX-Splitter 4 RDM

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
SERIAL_NUMBER[1]			✔	PID: 0xD400
DISPLAY_AUTO_OFF[1]		✔	✔	PID: 0xD401

1. Manufacturer depending RDM control commands (MSC – Manufacturer Specific Type)

Manufacturer depending RDM control commands

SERIAL_NUMBER
PID: 0xD400

Outputs a text description (ASCII-Text) of the device serial number.

- **GET Send:** PDL=0
- **Receive:** PDL=21 (21 Byte ASCII-Text)

DISPLAY_AUTO_OFF
PID: 0xD401
Sets the time after which the display is switched off (DISPLAY_LEVEL = 0).
Valid values are: 0 – NO AUTO OFF

- 600 – 1 minute
- 1200 – 2 minutes
- 1800 – 3 minutes
- 2400 – 4 minutes
- 3000 – 5 minutes
- 3600 – 6 minutes
- 4200 – 7 minutes
- 4800 – 8 minutes
- 5400 – 9 minutes

GET Send: PDL=0
Receive: PDL=2 (1 Word)
SET Send: PDL=2 (1 Word)
Receive: PDL=0

Dimensions
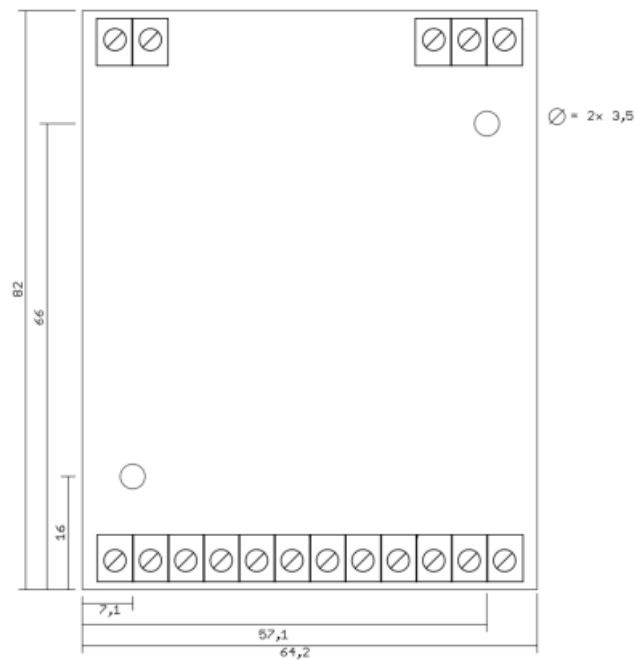
Accessories

Top hat rail mounting 700

Power supply 12V

CE-Conformity

This assembly (board) is controlled by a microprocessor and uses high frequency. In order to

maintain the properties of the module with regard to CE conformity, installation into a closed metal housing in accordance with the EMC directive 2014/30/EU is necessary.

Disposal
Electronical and electronic products must not be disposed in domestic waste. Dispose the product at the end of its service life in accordance with applicable legal regulations. Information on this can be obtained from your local waste disposal company.

Warning
This device is no toy. Keep out of the reach of children. Parents are liable for consequential damages caused by nonobservance for their children.

Risk-Notes
You purchased a technical product. Conformable to the best available technology the following risks should not excluded:

Failure risk
The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

Initiation risk
For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

Operating risk
The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

Misusage risk
Any nonstandard use could cause incalculable risks and is not allowed.

Warning: It is not allowed to use the device in an operation, where the safety of persons depend on this device.

assured characteristics. The guidance and the features may be changed at any time and without previous announcement.

Documents / Resources

DMX4ALL DMX-Splitter 4 RDM [pdf] User Manual
DMX-Splitter 4 RDM, DMX-, Splitter 4 RDM, 4 RDM