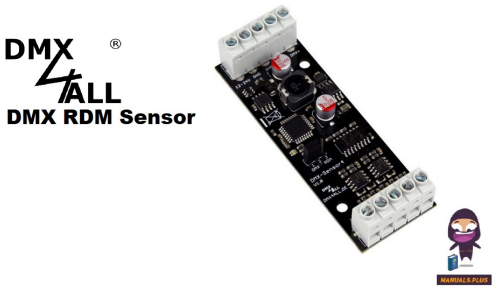

DMX4ALL DMX RDM Sensor User Manual

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DMX 4 ALL ®

DMX4ALL DMX RDM Sensor

Product Usage Instructions

- The DMX/RDM-Sensor 4 is a versatile converter with 4 signal inputs that can function as both a DMX output device/source and an RDM device.
- The DMX/RDM-Sensor 4 can operate as a DMX output device (inputs to DMX channels) or as an RDM device (inputs to sensor values).
- Each of the 4 inputs can be independently set as an analog input (0-5V or 0-10V) or as a digital input (Active Low, Active High, or Toggle).
- The device can be configured via RDM using DMX. Sensor values for each input can be requested through the RDM-Parameter SENSOR_VALUE.
- Settable Average Filter: Create an average value for each input to compensate for signal fluctuations.
- Settable Slope Correction: Adjust the output curve for each input using slope correction.
- Settable DMX-Addresses: Configure DMX addresses for each input, allowing signal output on up to 8 DMX channels.
- Settable Device Label: Name each sensor uniquely via RDM by setting the device label for each input.
- The RDM parameters Lock Pin and Lock State enable locking device settings to prevent unauthorized changes..

Description

- The DMX/RDM-Sensor 4 is a converter with 4 signal inputs and can be used both as a DMX output device / DMX source or as an RDM device.

Different Operation Modes

- The DMX/RDM-Sensor 4 can be run as DMX output device (inputs to DMX channels) or RDM device (inputs to sensor values).

Four Analog- or Digital Inputs

- Each of the 4 inputs can be set independently as analog input (0-5V or 0-10V) or as digital input (Active Low, Active High or Toggle).

RDM Support

- The DMX/DMX-sensor 4 can be configured via RDM using DMX.

Sensor Values

- Via the RDM-Parameter SENSOR_VALUE for each of the 4 inputs the sensor values can be requested.

Settable Average-Filter

- The average filter can be set for each input and can be used to create an average value that compensates for fluctuations in the input signal.

Settable Slope Correction

- The output curve can be set for each input using the adjustable slope correction.

Settable DMX-Addresses

- The DMX addresses can be set for each input, allowing the input signal to be output on up to 8 DMX channels.

Settable Device Label

- The device label can be set for each input to name each sensor uniquely via RDM.

Lockable Device settings

- The RDM parameters Lock Pin and Lock State allow or avoid changing saved RDM parameters to prevent unauthorized changes.

Free RDM-Software

- For setting the parameters via RDM, our free RDM Configurator software is available for download on our website www.dmx4all.de.

Top hat rail housing available

- The top-hat rail housing 350 or the top-hat rail housing 350 flat are available as accessories for the DMX/RDM-Sensor 4.

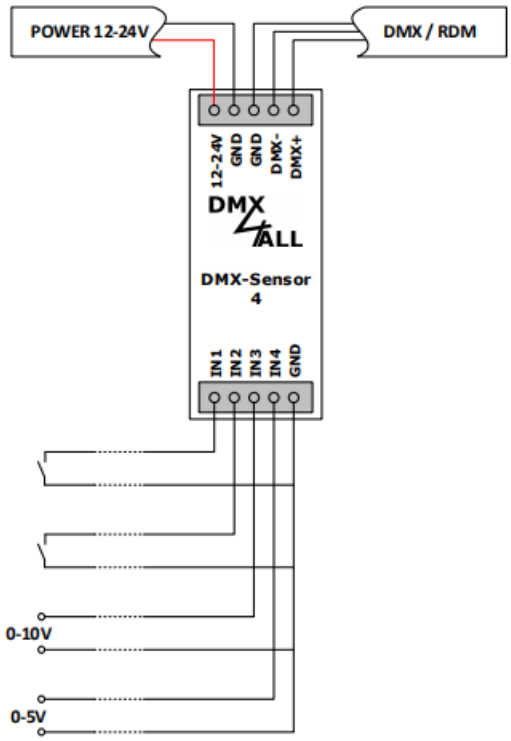
Data Sheet

- Power supply: 12-24V DC (150mA@12V / 100mA@24V)
- Protocol: DMX512 or RDM
- Operation modes: DMX (Inputs to DMX channels)
- RDM (Inputs to RDM sensor values)
- Inputs: 4 Analog (0-10V) or Digital Inputs
- Connections: Screw terminals
- Dimension: 29,2mm x 82mm

Content

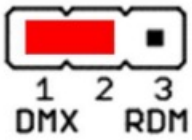
- 1x DMX/RDM-Sensor 4
- 1x Quick guide German and English

Connection

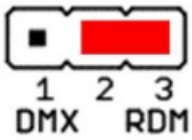


Operation Mode

The DMX/RDM-Sensor 4 can be used for two different operating modes. This is selected via the jumper:



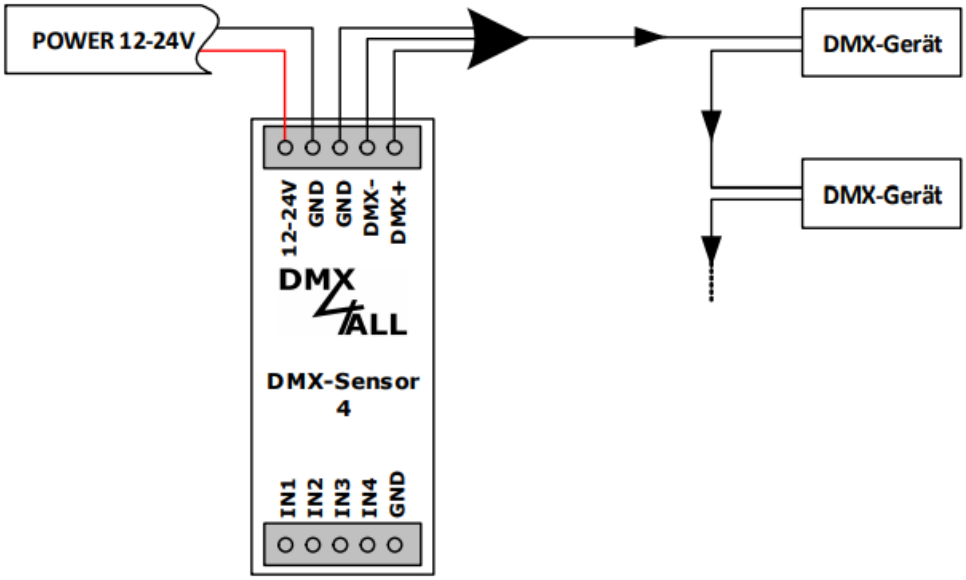
Pin 1 and 2 = DMX



Pin 2 and 3 = RDM

DMX

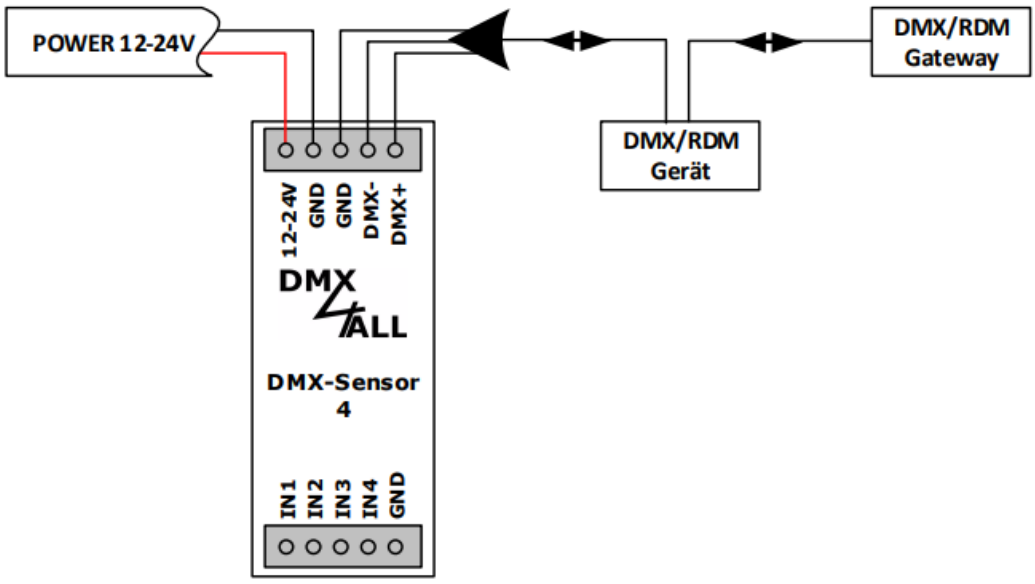
- Within the DMX operation mode, the DMX/RDM-Sensor 4 is a DMX source. The input signals are outputted according to the DMX addresses and DMX personalities specified in the configuration.



The RDM parameter DMX_CHANNELS specifies the DMX addresses on which the output should take place. Up to 8 DMX addresses must be specified, separated by commas or minus for range

RDM

Within the RDM operation mode, the DMX/RDM-Sensor 4 is a RDM device. The input signals are provided according to the configuration via RDM sensor values



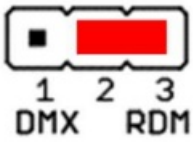
RGB-LED-Display
The DMX/RDM-Sensor 4 has one RGB-LED-Display, showing the current device status:

- The power supply is not connected
- RED lights No operation mode selected
- RED flashes No DMX input signal selected
- GREEN lights The device works with operation mode RDM
- BLUE lights The device works with operation mode DMX

Configuration

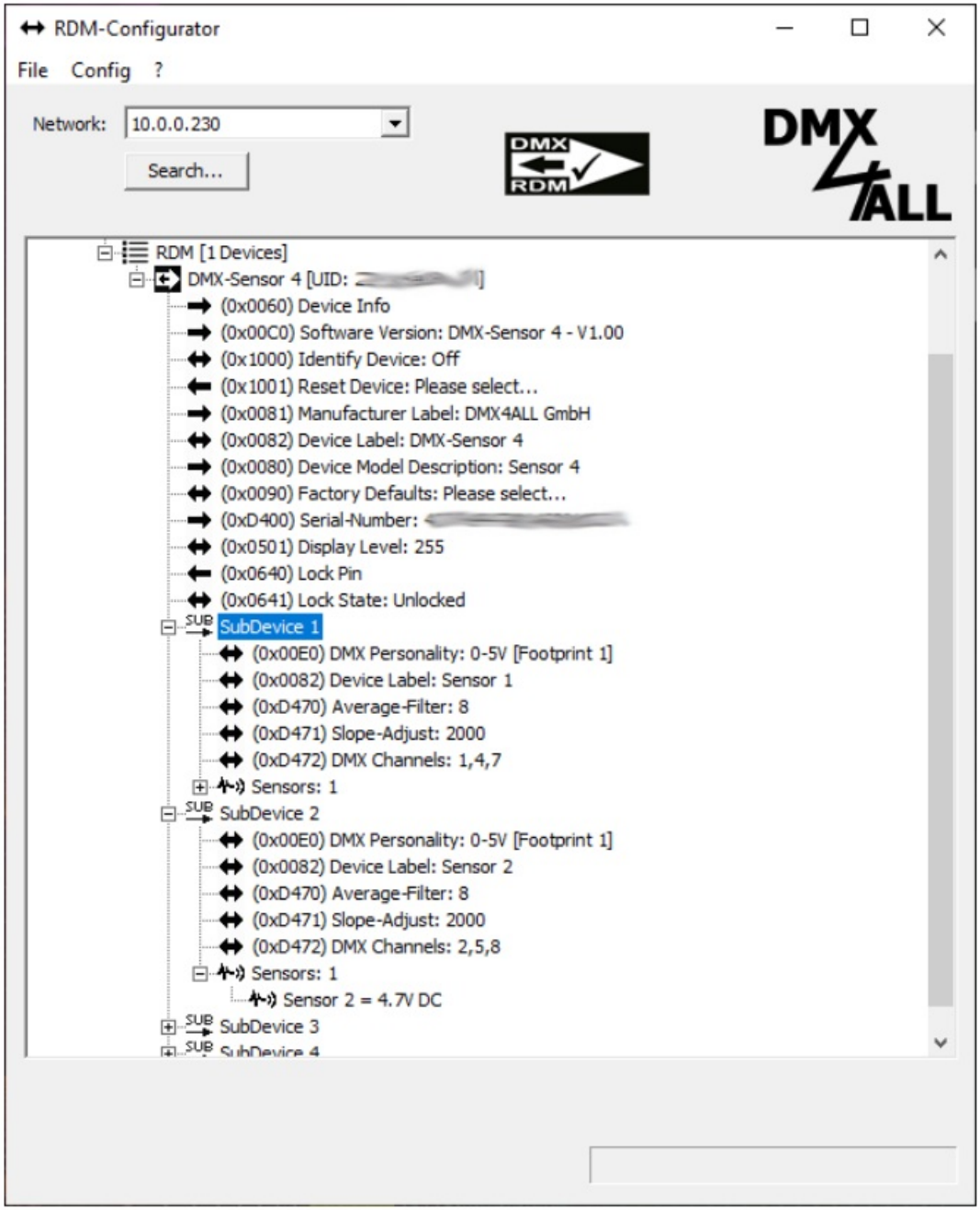
The DMX/RDM-Sensor 4 must be configured in RDM mode.

- A jumper must be plugged for RDM (Pin 2 and 3)



- Connect the DMX/RDM-Sensor 4 with an ArtNet-RDM Gateway
- Use RDM-Software, to set parameters

The free RDM Configurator is recommended in combination with a DMX-Stage Profi RDM Gateway.



RDM is the short form for Remote Device Management. As soon as the device is within the system, device-dependent settings can 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
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
SENSOR_DEFINITION			✓	E1.20
SENSOR_VALUE			✓	E1.20
LOCK_STATE		✓	✓	E1.37
LOCK_STATE_DESCRIPTION			✓	E1.37
LOCK_PIN		✓		E1.37

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
SERIAL_NUMBER[1)]			✓	PID: 0xD400
AVERAGE_FILTER[1)]		✓	✓	PID: 0xD470
SLOPE_ADJUST[1)]		✓	✓	PID: 0xD471
DMX_CHANNELS[1)]		✓	✓	PID: 0xD472

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

AVERAGE_FILTER

- PID: 0xD470
- This parameter sets the average filter value (Average-Filter).
- GET Send: PDL=0
- Receive: PDL=1 (1 Byte number of filter values)
- SET Send: PDL=1 (1 Byte number of filter values)
- Receive: PDL=0

SLOPE_ADJUST

- PID: 0xD471
- This parameter sets the slope correction.
- GET Send: PDL=0
- Receive: PDL=2 (2 Byte value of slope correction)
- SET Send: PDL=2 (2 Byte value of correction)
- Receive: PDL=0

DMX_CHANNELS

- PID: 0xD472
- This parameter sets the DMX channels.
- GET Send: PDL=0
- Receive: PDL=32 (32 Byte ASCII-String)
- SET Send: PDL=2 (32 Byte ASCII-String)
- Receive: PDL=32

Lock device settings

The RDM parameters Lock Pin and Lock State allow or prohibit changing saved RDM parameters.

Lock Pin

- The four-digit pin code number for the lock function can be set using the Lock Pin parameter.
- After entering the correct currently used PIN (Old PIN) in the RDM software (e.g. RDM Configurator), the new, desired PIN can be entered in the New PIN field and saved by setting the parameter.
- When delivered, the lock pin is always 0000.

Lock State

The device settings can be locked or unlocked using the Lock State parameter. The following lock states can be selected:

Value	Name	Description
0	Unlocked	Parameters are editable
1	RDM Locked	Parameters cannot be edited via RDM

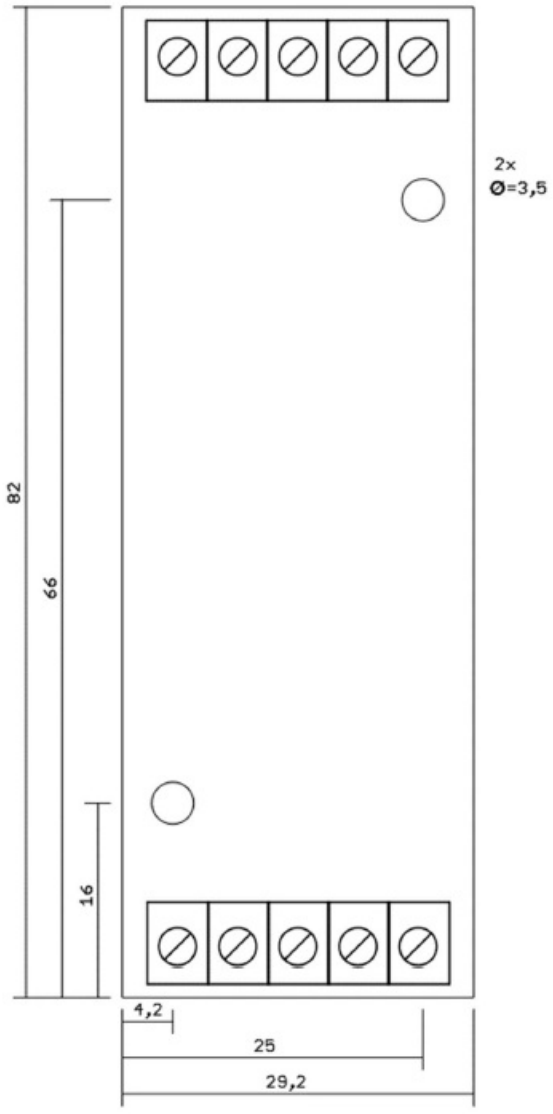
When delivered, the device is always Unlocked. The Lock PIN (PIN Code) is required to change the Lock State parameter

- The RDM parameters Identify Device, Reset Device and Display Level can always be executed, regardless of the lock state

Factory Reset

- To reset the DMX/RDM-Sensor 4 into delivery status, select and execute the parameter FACTORY_DEFAULTS via RDM.

Dimension



Accessory

- Top-hat rail housing 350

- Top-hat rail housing 350flat

- Wall bracket for top-hat rail housing

- Power supply 12V

Revision History
Firmware V1.00

- First Release

CE-Conformity

This assembly (board) is controlled by a microprocessor and uses high frequency. In order to maintain the properties of the module concerning CE conformity, installation into a closed metal housing following the EMC directive 2014/30/EU is necessary.

Disposal

Electronical and electronic products must not be disposed of in domestic waste. Dispose of the product at the end of its service life following 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, who 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 depends on this device.

CONTACT

- DMX4ALL GmbH Reiterweg 2A D-44869 Bochum
- Germany
- **WWW.DMX4ALL.DE**

FAQ

- How do I switch between DMX and RDM operation modes?
    - The operating mode is selected via a jumper: Pin 1 and 2 = DMX Pin 2 and 3 = RDM
- How many DMX addresses can be specified for signal output?
    - Up to 8 DMX addresses can be specified for signal output on each input.
- Can I lock the device settings to prevent unauthorized changes?
    - Yes, the RDM parameters Lock Pin and Lock State allow locking device settings

Documents / Resources

	**DMX4ALL DMX RDM Sensor** [pdf] User Manual DMX RDM Sensor, RDM Sensor, Sensor

References

- **DMX4ALL GmbH - DMX und RDM-Technik Made in Germany**
- **User Manual**