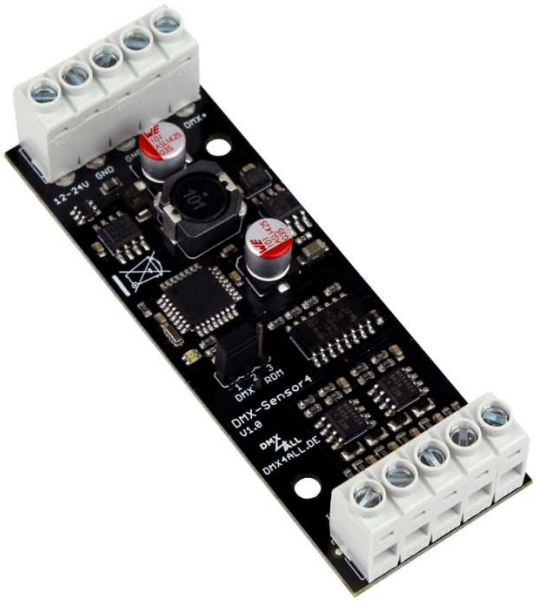
DMX/RDM-Sensor 4

User Manual



For your own safety, please read this user manual and warnings carefully before installation.

Contents

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

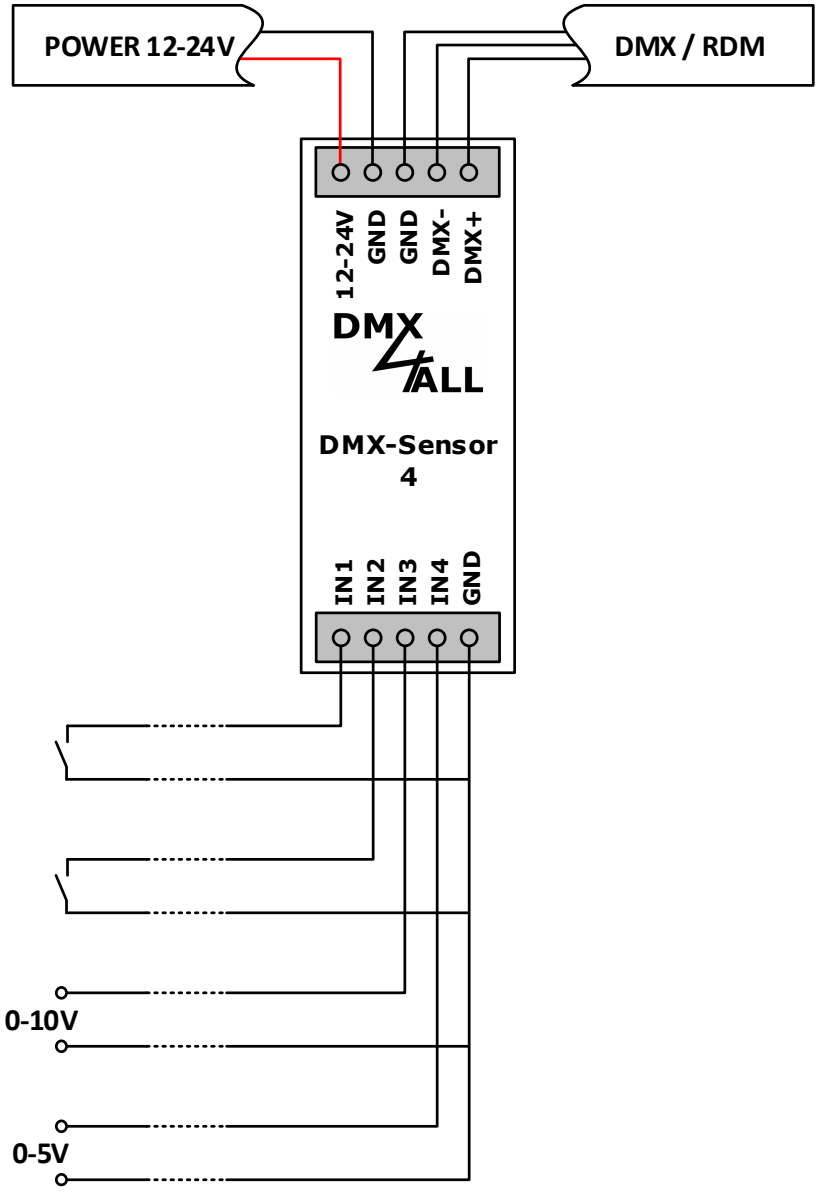
Power supply:	12-24V DC (150mA@12V / 100mA@24V)
Protocol:	DMX512 or RDM
Operation modes:	DMX (Inputs to DMX channels) RDM (Inputs to RDM sensor values)
Inputs:	4 Analog (0-10V) or Digital Inputs
Connections:	Screw terminals
Dimension:	29,2mm x 82mm

Content

1x DMX/RDM-Sensor 4

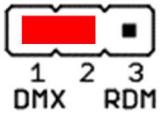
1x Quick guide german and english

Connection

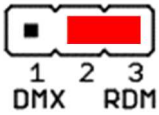

POWER 12-24V
DMX / RDM
12-24V
GND
GND
DMX-
DMX+
DMX-Sensor 4
IN1
IN2
IN3
IN4
GND
0-10V
0-5V

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

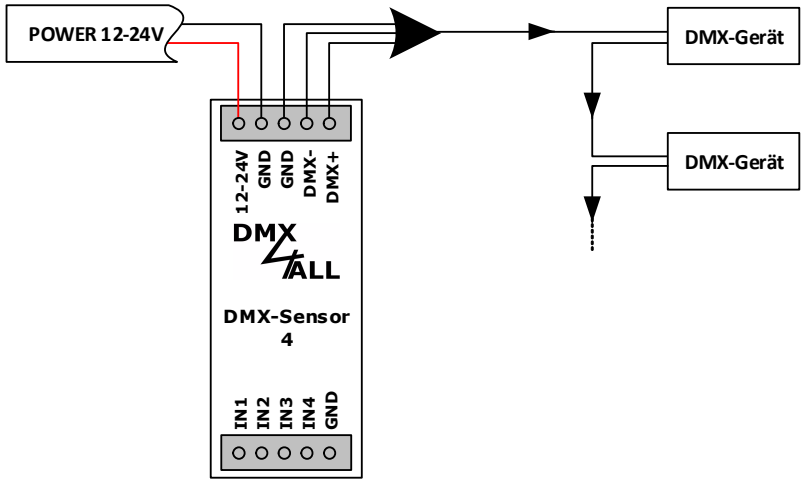


Pin 2 and 3 = RDM

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 personality specified in the configuration.

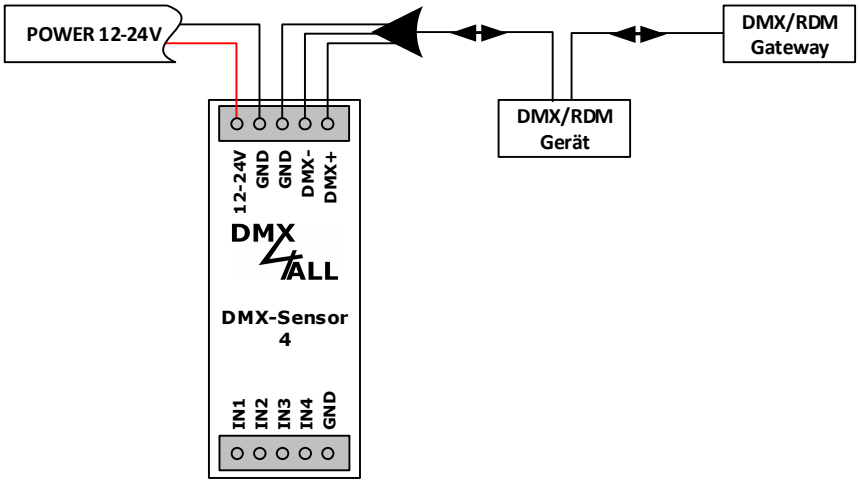


The RDM parameter DMX_CHANNELS specifies the DMX addresses on which the output should take place. Up to 8 DMX addresses must be specified, separated by commas or minus for range.

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

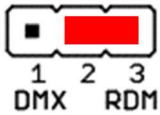
The **DMX/RDM-Sensor 4** has one RGB-LED-Display, showing the current device status:

Off	Power supply 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.

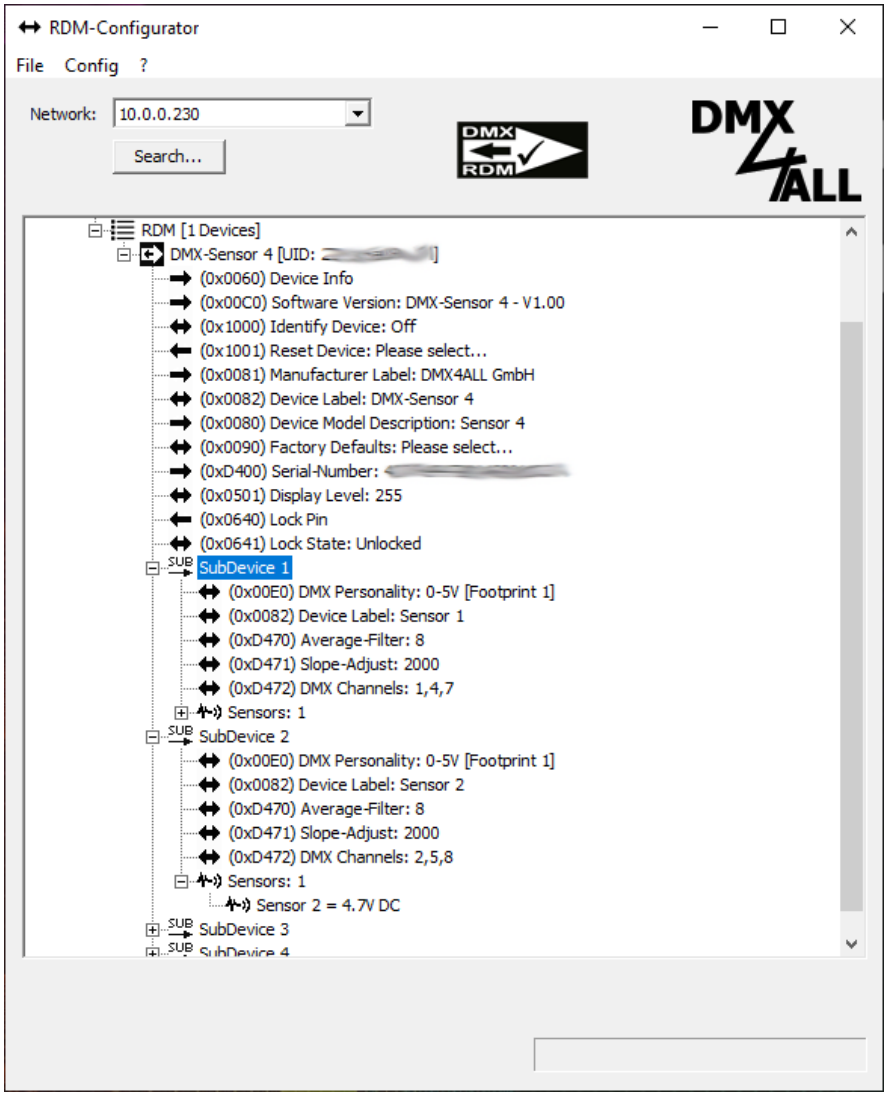
- Jumper must be plugged for RDM (Pin 2 and 3)



- Connect the DMX/RDM-Sensor 4 with a ArtNet-RDM Gateway

- Use a RDM-Software, to set parameters

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



RDM

RDM is the short form for **R**emote **D**evice **M**anagement.

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)

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)

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*.

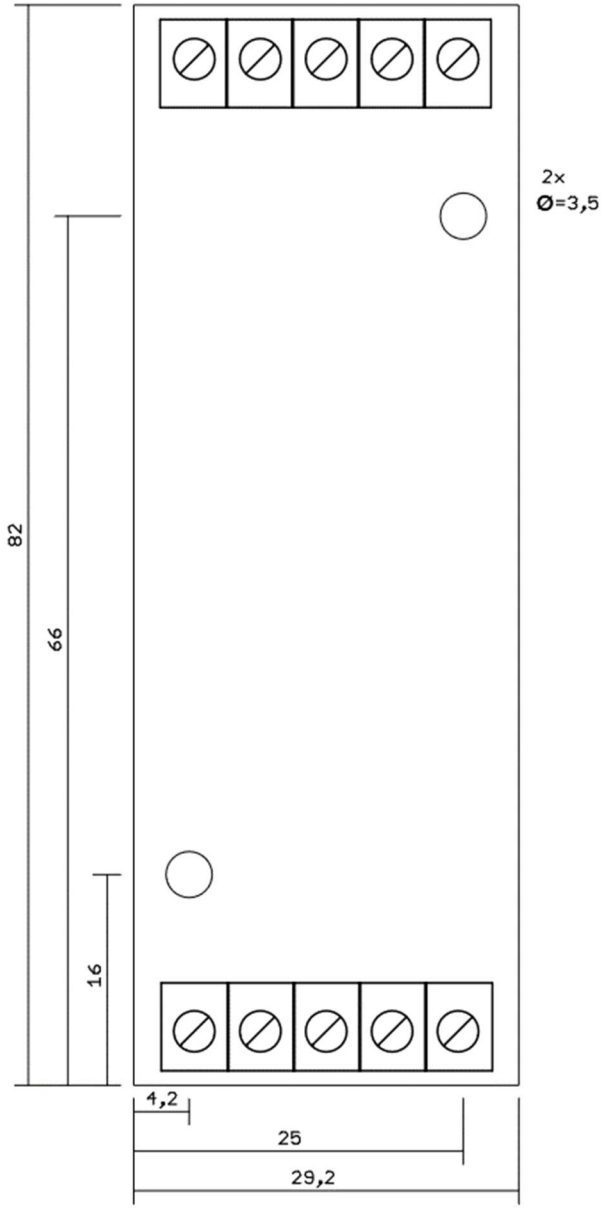
The Lock Pin (PIN Code) is required to change the Lock State parameter.

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



All details in mm

Accessory

Top-hat rail housing 350

Top-hat rail housing 350flat

Wall bracket for top-hat rail housing

Power supply 12V

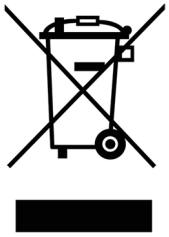
Revision History

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 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.

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