DMX UNIVERSE
DR1.1 RDM
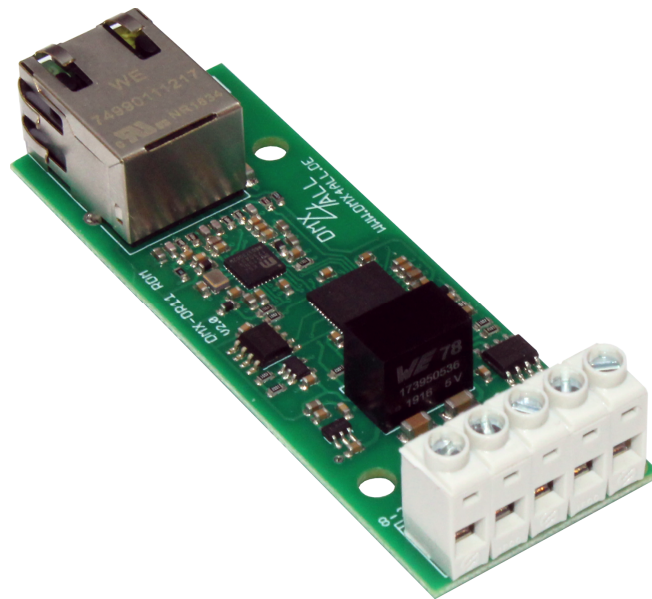
User manual

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

Description

The **DMX UNIVERSE DR1.1 RDM** is a compact Ethernet Interface (DMX via Ethernet), which can be used for Art-Net™/TPM2/sACN to DMX/RDM or DMX to Art-Net™. Via a standard RJ45 net work connection the connection to ethernet net work occurs.

Switchable DMX direction
The DMX direction can be switched according to usage.

Settable DMX frame rate
In the DMX-OUTPUT mode the DMX frame rate is adjustable, so this interface is compatible to "slow" DMX devices.

RDM via Art-Net™
Supports RDM via Art-Net™ and thus enables connected RDM devices to be configured via Art-Net™ using corresponding software.

Disengageable LED display
The LED-Display at the DMX UNIVERSE DR1.1 RDM is disengageable via Art-Net™-Command (AcLedMute) or time controlled. This is very helpful to avoid disturbing "light points" on stage.

Easy Configuration
A user friendly configuration via web browser allows a fast and uncomplicated setting of all parameters. No special software is necessary, a standard web browser is enough. So, the configuration is possible any time from PC, Smartphone or tablet. For an easy setting of the IP we provide the IP-Configurator as PC-Tool or Android-App for free. The net work settings can be leaved unchanged and the IP can be configured without any problems.

Compact Design
With a width of only 29.2mm the DMX UNIVERSE DR1.1 RDM is suitable for the optional DIN rail housing 350.

Art-Net™ Merge-Function
Two Art-Net™ sources are output by LTP (Latest) or HTP (Highest) combined to the DMX output.

Combinable with WiFi components
In combination with a WLAN bridge the DMX UNIVERSE DR1.1 RDM can also be integrated into WLAN net works.

Firmware update function
To use future functions the DMX UNIVERSE DR1.1 RDM offers a Firmware-Update-Function. This can be started with any web browser, so no direct access to the device is necessary!

DMX4ALL Communication-Interface
The DMX UNIVERSE DR1.1 RDM has an additional communication interface using the DMX4ALL-Commands via TCP or UDP packages.

Data sheet

Power supply:	8-24V DC (150mA@12V; 100mA@24V)
Connections:	Ethernet: RJ45 Power: Screw terminals DMX: Screw terminals
DMX:	Settable: - 512 channels OUT - 512 channels IN
DMX frame rate:	Settable (5 - 44 fps)
RDM:	RDM via Art-Net™ on/off switchable
Data Fail (DMX-OUT):	HOLD last data CLEAR all to 0% SET all to 100% NO OUTPUT DEFAULT VALUES INTERNAL PROGRAM
DMX-IN Fail (DMX-IN):	HOLD last data CLEAR all to 0% SET all to 100% NO OUTPUT DEFAULT VALUES
Protocol:	Art-Net™ TPM2 sACN (Unicast) DMX4ALL Commands (as with the LAN-DMX STAGE-PROFI)
Internal program:	User configurable Stand-Alone Program
LED display:	Green: ethernet connection Yellow: data transfer
Dimensions:	29,2mm x 82mm

Contents

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1x   Quick guide german and english

Connection

Ethernet

DMX
UNIVERSE
DR1.1 RDM

8-24V GND GND DMX+ DMX-

POWER 8-24V   DMX
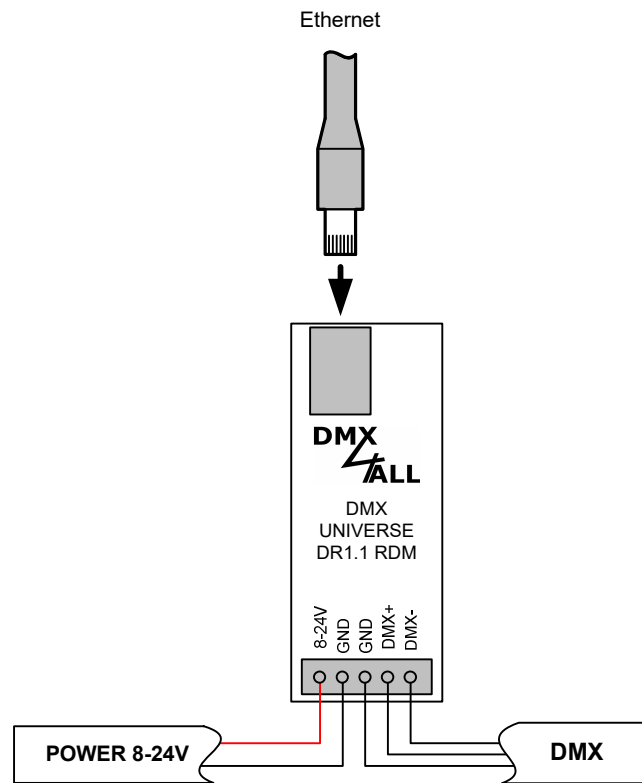
LED-Display

LED green

The green LED flashes, if no Ethernet-Connection is available and lights permanently, if an Ethernet-Connection is available.

### LED yellow

The yellow LED lights up as soon as data are received.

Configuration

The configuration of the **DMX UNIVERSE DR1.1 RDM** occurs about a web interface which can be called about any web browser.

Set the IP with IP-Configurator

The **IP-Configurator** enables the IP-Address and the net mask setting even if the PCs network setting is not within the IP range of the DMX UNIVERSE DR1.1 RDM.

- Install the program IP-Configurator
- Connect the DMX UNIVERSE DR1.1 RDM with net work and turn it on
- Start the program IP-Configurator
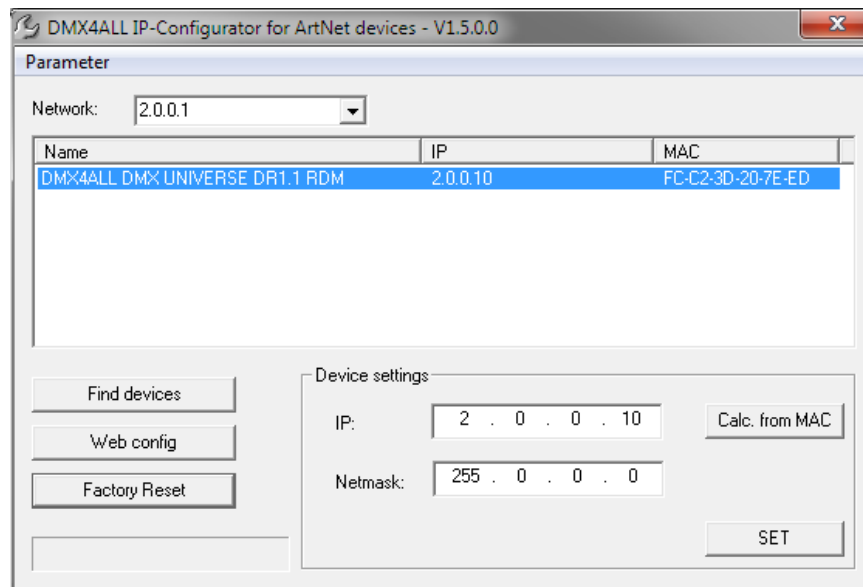
- The DMX UNIVERSE DR1.1 RDM is shown in the list
- Select entry (click)
- Enter the news IP and net mask
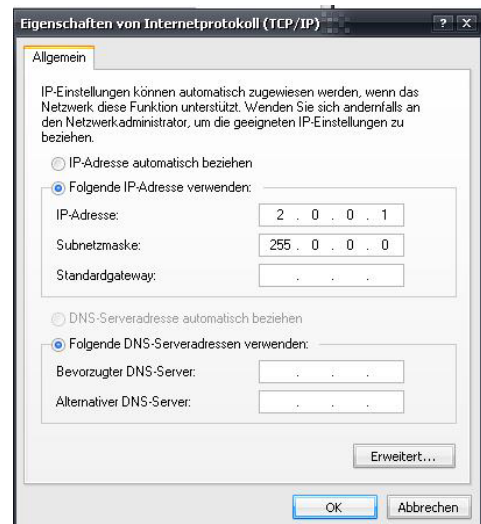- Click SET

Set IP with web browser

During the delivery status the given **IP-Address** is **2.0.0.10**, which can be used via the web interface.

Set the net work card of the PC to this IP range to call the IP-Address 2.0.0.10 via the web browser.

⚠ The net work settings of the PC must be set to **IP address 2.0.0.1** and
sub net mask to **255.0.0.0**

Please take further details from
Art-Net™-Specifications.

Device Configuration

Call the DMX UNIVERSE DR 1.1 RDM IP-Address in the web browser and address bar (delivery status: 2.0.0.10) to get the following configuration site:

Network Settings

⚠ Each device (node) needs an own **IP-Address**, so the assignment in the net work occurs clearly. According to the Art-Net™ specifications please use the IP-Addresses 2.x.x.x or 10.x.x.x.

Each other IP addresses are also possible, for example 192.168.1.10.
Then the net mask must be changed to 255.255.255.0 !

For an easier identification you can assign each node with any names.
The Short-Name is limited to 18 marks and the Long-Name is limited to 64 marks.
The net mask is to leave according to the Art-Net™ specifications auf 255.0.0.0.

Device Settings

Device Settings specify the DMX direction (DMX Input / DMX Output) as well as the used protocol (Art-Net™ / TPM2 / sACN).

RDM Settings

Enable RDM activates the RDM function of the DMX UNIVERSE DR 1.1 RDM .

In addition to the global search for RDM compatible devices, the IDs specified under **Search ESTA-IDs** are also requested during discovery.
During standard operation this field can remain empty.

DMX4ALL Command Settings

The configuration of the Ethernet port for the DMX4ALL commands is done here.

LED Indicator Settings

The option **LED auto off** turns off automatically the LED display at the DMX UNIVERSE DR 1.1 RDM after 5 minutes if an Ethernet connection exists throughout.

SAVE stores the configuration.

DMX-Output

For using the **DMX UNIVERSE DR1.1 RDM** as DMX-Output (Ethernet to DMX) please select the Interface Mode *DMX-Output* in the Main-Settings.

By clicking *DMX-Output* you reach the following configuration site:
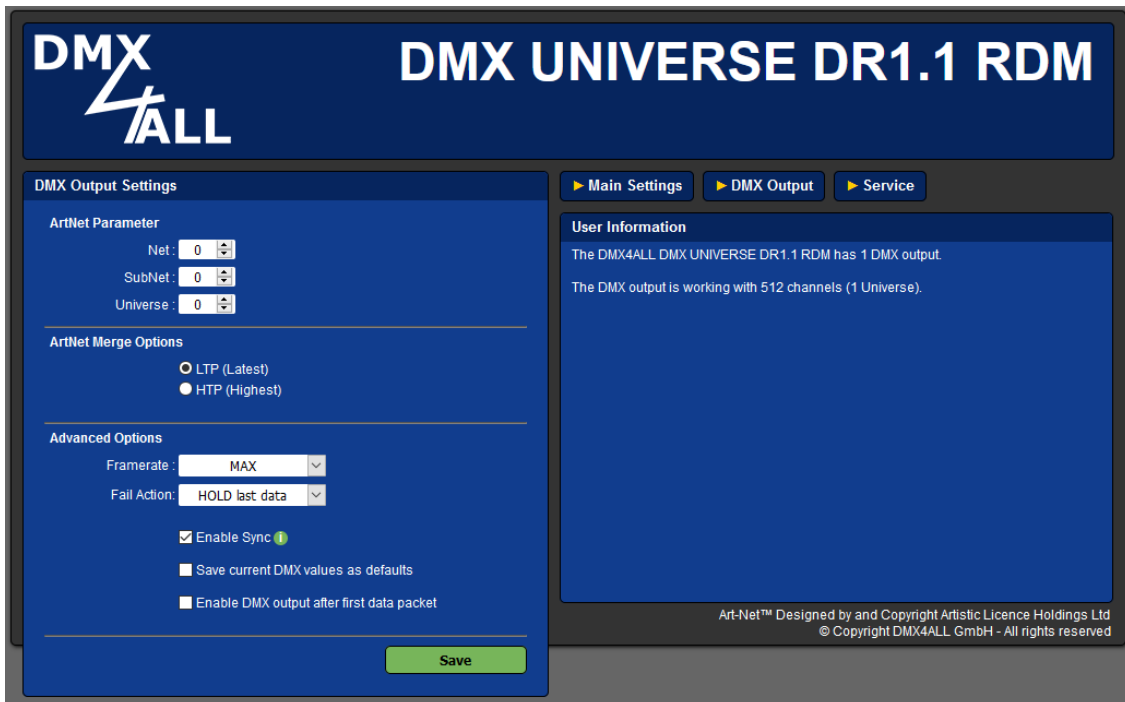
The Art-Net™ parameter **SubNet, Net** and **Port** must be set in accordance to the Art-Net™ specifications and show the aim for the DMX data.

The **Merge** settings can be adjusted at LTP (Latest) for last change or HTP (Highest) for highest value.

Framerate set the maximum DMX frame rate in the output.
MAX is the maximum frame rate of ca. 44 fps (frames / second).

Fail Action sets the behavior in case of failure of the Art-Net™ data.

Via **Enable Sync** the DMX output of several devices can be synchronized.

The option **Save current DMX values as defaults** stores current DMX values and restores these in case of Fail Action.

The option **Enable DMX output after first data packet** starts the DMX-Output not until the first Art-Net™ data package is received after turn on.

DMX-Input

For using the **DMX UNIVERSE DR1.1 RDM** as DMX-Input-Interface (DMX to Art-Net™), please select the interface mode **DMX-Input** in the main settings.

By clicking **DMX-Input** you reach the following configuration site:

The Art-Net™ parameter **SubNet, Net** and **Port** must be set in accordance of Art-Net™ specifications and show the aim for the DMX data.

Use Broadcast: The DMX data will be send to all devices within the Art-Net™
Use Unicast: The DMX data will be send to a specified device with the **Unicast IP** within the Art-Net™

Several actions are available for the DMX input in the case of a breakdown of the DMX signal (**DMX Input Fail**).

NO DATA	- via Art-Net™ will be no DMX input received
HOLD last DMX data	- the last data will be retained
CLEAR all DMX channels to 0%	- all DMX channels will be set to 0
SET all DMX channels to 100%	- all DMX channels will be set to 255

The **Update-Rate** with which the DMX input data are outputted can be switched in several times.
On change data transferred only the DMX input data if these changes, however max. every 0.1 seconds.

DMX Framerate transferred the received DMX values as soon as a frame has finished. So, the frame rate of the incoming DMX signal will be used for the update rate.

Create / Use internal program

The **DMX UNIVERSE DR1.1 RDM** has a user programmable Stand-Alone-Function which can replay an internal program.

The internal program can be used within the DMX-Output-Mode and can be executed after turning and in case of hold off Art-Net™ data (*DMX Output → Fail Action*).

The internal program is created with the software DMX-Configurator.

Program 1 (New 1) is executed in case Art-Net™-Fail

Execution after switching on
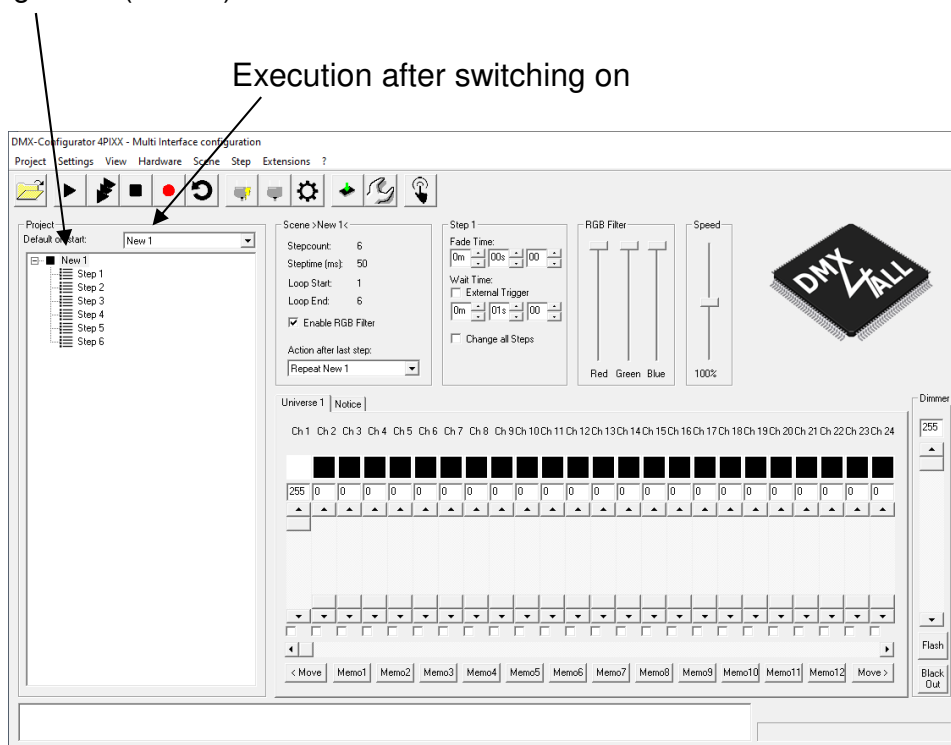
The program created with the DMX-Configurator software is then transferred to the **DMX UNIVERSE DR1.1 RDM** via *Hardware → Write* memory.

DMX4ALL-Command

The **DMX UNIVERSE DR1.1 RDM** has a further communication interface, using DMX4ALL-Commands.

For the communication interface the following settings are available in the main settings:

DMX4ALL Command Settings
- Disabled
- TCP
- UDP
- 10001 Port

(Every change needs a restart of the hardware.)
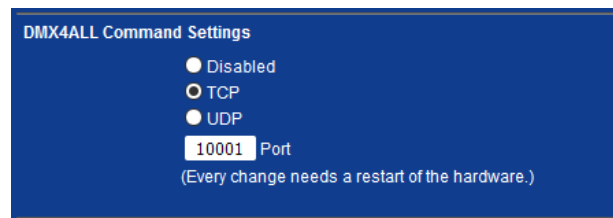
The DMX4ALL-Commands can be controlled by sending the RAW data packages via TCP or UDP to the set port.

The possible DMX4ALL-Commands can be found in the separate DMX4ALL-Command description.

VCP-Control

For controlling via a COM-Port a TCP-VCP-program must be installed, which provides a virtual Com Port (VCP).

We recommended the tool *Serial to Ethernet Connection* which we tested. You find this tool as download in our support area.

During the installation you have to enter a password (see opposite figure).

After the installation please start the tool „Centos SEC" you find on your desktop. Now, add a VCP with *Add* and enter the parameters for this VCP-Port as shown opposite.

Make sure, that the IP is used which is adjusted via the web browser.
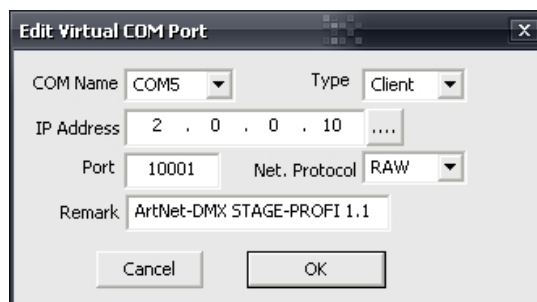
Finally, click into the main window to **Update all** to activate the VCP. Now, the status *Available* and the COM-Port will be shown into the device manager.
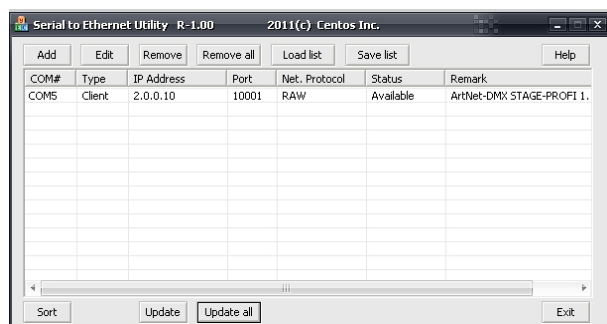
Factory Reset

The **DMX UNIVERSE DR1.1 RDM** can be reset into the delivery status via the web browser.

Please proceed as follows:

- Open web browser and call the **Service** site
- Enter the Service-Code „7319" within the input field
- Click *Send*
- Following wait minimum 10 seconds

If the Factory-Reset is done via the web site the IP-Address and the Subnet Mask is reset. It is not always possible to return. Set the IP-Address again if necessary (see *Set the IP with IP-Configurator* or *Set the IP via web browser*).

Alternatively, you can reset the delivery status via the **DMX4ALL LAN-Updater:**

- Turn on the device
- Start software **DMX4ALL LAN-Updater**
- Generate net work connection to PC
- Turn on device
- The yellow LED lights for ca. 3 seconds
- Click *FIND* while yellow LED lights
- Select **DMX UNIVERSE DR1.1 RDM** from list
- Click **FACTORY RESET**
- Now, the Reset will be executed

Alternatively, you can restore the delivery status via **DMX4ALL IP-Configurator**:

- Turn on device
- Start the software **DMX4ALL IP-Configurator**
- Click *FIND*
- Select **DMX UNIVERSE DR1.1 RDM** from list
- Click **FACTORY RESET**
- Now, the Reset will be executed

Firmware-Update

The **DMX UNIVERSE DR1.1 RDM** has an update function, which allows transferring future firmware versions.

Please proceed as follows:

- Turn off the device
- Start the update software **DMX4ALL LAN-Updater**
- Generate network connection to PC
- Turn on the device
- The yellow LED lights for around 3 seconds
- During the yellow LED is on press *FIND*
- Select **DMX UNIVERSE DR1.1 RDM** from list
- Click *Firmware-Update*
- Select firmware file (.bin) and confirm
- Wait until the update has finished (Entry *RUN application.* appears)

Activate firmware update via web browser (older units):

- Open web browser and call up the site **Service**
- Enter the service code „**1379**" into the text box
- Click *Send*
- Start the update software **DMX4ALL LAN-Updater**
- Select the **DMX UNIVERSE DR1.1 RDM** from list
- Click *Firmware-Update*
- Select and confirm firmware file (.bin)
- Wait until the update has finished (Entry *RUN application.* appears)
- Click *Back* within the web browser

⚠ If an error occurs during the update you can activate the firmware update at the device directly any time and start again.

Dimensions
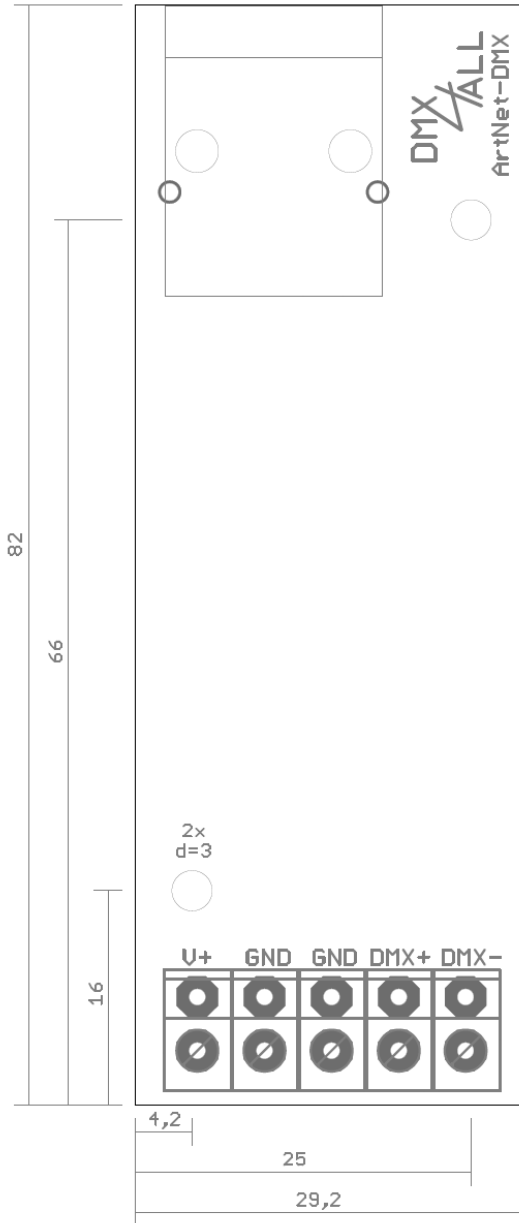
All details in mm

Accessories

Top hat rail housing 350
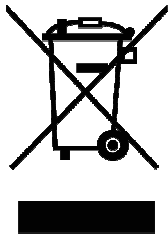
Power supply 12V / 20W

Net work cable

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.

DMX

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4ALL

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