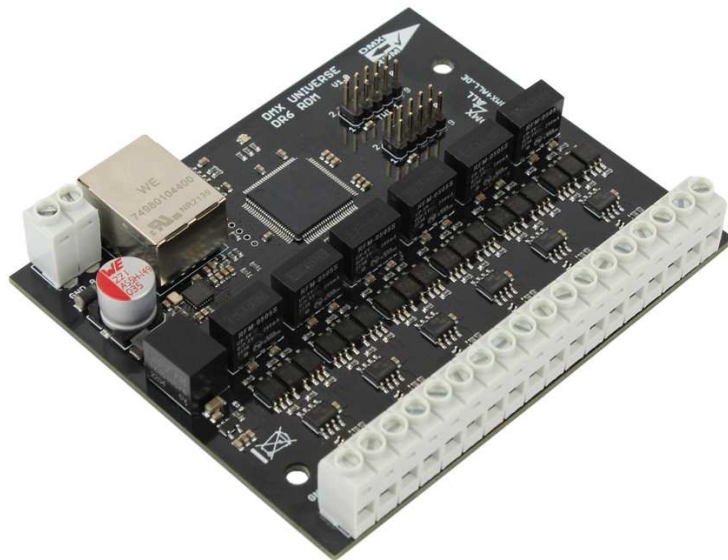


DMX UNIVERSE DR6 RDM

User manual



**ART
NET**
ETHERNET

Art-Net™ Designed by and
Copyright Alderamin Group Ltd.



DMX®
ALL

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Important Notes



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



A firmware update is recommended after receipt the product. This is the only way to ensure that the device has the latest version. You can find the latest firmware on the homepage.

Description

The **DMX UNIVERSE DR6 RDM** is an Ethernet to DMX gateway with up to 6 bidirectional DMX universes (DMX over Ethernet) and RDM functionality.

6 DMX ports

The DMX UNIVERSE DR6 RDM offers 6 bidirectional DMX ports to which the DMX/RDM devices can be connected. The individual DMX ports can be configured independently.

Galvanically isolated DMX connections

All 6 DMX connections are each designed with their own galvanic isolation.

Art-Net™ to DMX / DMX to Art-Net™

The DMX direction can be switched per DMX port, depending on the usage.

Adjustable FAIL function

Each DMX port offers a configurable FAIL function. This specifies the behavior if DMX or ArtNet data is missing.

Art-Net™ Merge-Function

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

RDM via Art-Net™

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

Synchronous DMX output

The DMX output is synchronized by receiving ArtSync packets.

RGB status display

The RGB status display clearly shows the device status.

Muteable LED display

The LED-Display at the DMX UNIVERSE DR6 RDM is muteable via Art-Net™-Command (AcLedMute) or time controlled. This is very helpful to avoid disturbing "light points" on stage.

Easy Webbrowser-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.

DMX-Monitor

The DMX monitor is available via the web interface. This means that the current DMX values can be displayed and checked simultaneously without any additional software.

DMX-Fader

The DMX fader is available via the web interface. This allows the DMX values to be output to be set without additional software.

DHCP

The DMX UNIVERSE DR6 RDM has a DHCP function for automatic addressing in the network.

Easy Network Configuration

For an easy setting of the IP we provide the IP-Configurator as PC-Tool or Android-App for free. The network settings can be left unchanged and the IP can be configured without any problems.

Combinable with WiFi components

In combination with a WLAN bridge the DMX UNIVERSE DR6 RDM can also be integrated into WLAN networks.

Firmware update function

To use future functions, the DMX UNIVERSE DR6 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 DR6 RDM has an additional communication interface using the DMX4ALL-Commands via TCP or UDP packages.

Top hat rail housing available

The top-hat rail housing 1050 is available as accessory for the DMX UNIVERSE DR6 RDM and therefore ideally suited for switch cabinet installation.

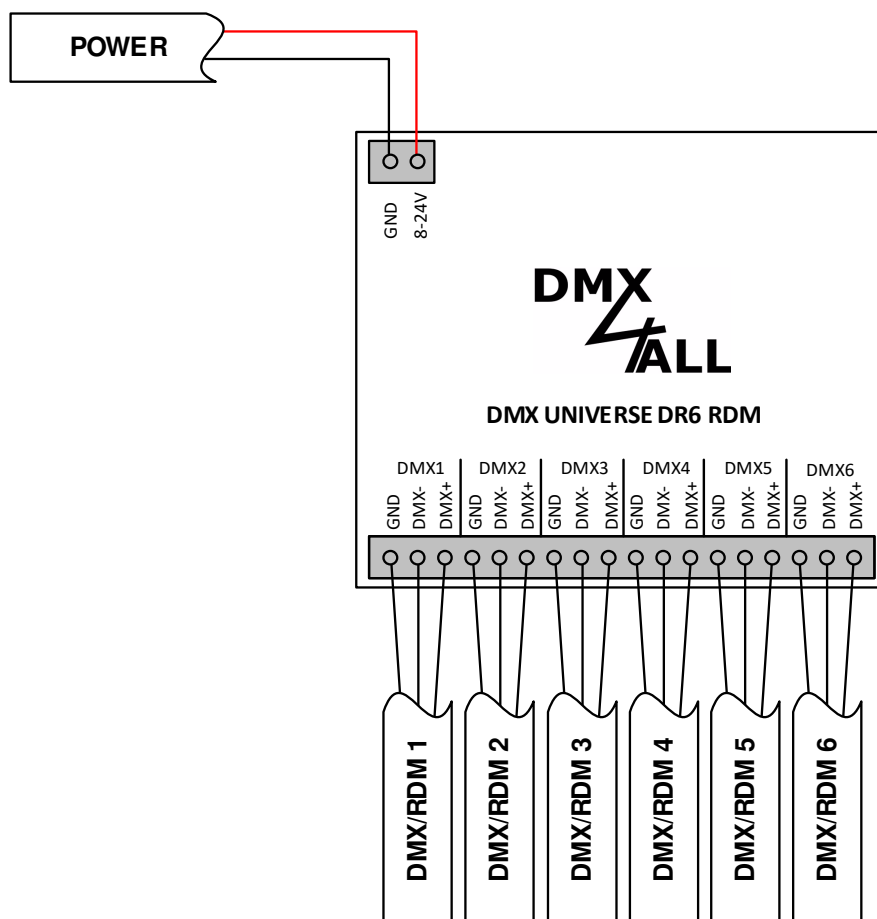
Data sheet

Power supply:	8-24V DC (150mA@12V; 100mA@24V)
Connections:	Ethernet: RJ45 Power: Screw terminals DMX: Screw terminals
DMX:	6 galvanically isolated ports each 512 channels OUT or 512 channels IN
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
DMX-IN Fail (DMX-IN):	HOLD last data CLEAR all to 0% SET all to 100% NO OUTPUT
Protocol:	Art-Net™ sACN (Unicast) DMX4ALL Commands
LED display:	Ethernet-Status (green + yellow) Geräte-Status (RGB)
Dimension:	99mm x 82mm

Contents

- 1x DMX UNIVERSE DR6 RDM
- 1x Quick guide german and english

Connection



LED Display

The **DMX UNIVERSE DR6 RDM** has several status LEDs.

A green and a yellow LED on the Ethernet port, showing the network activity.

Furthermore, a RGB-LED signals the device status.

Green Ethernet-LED

Off	Power supply not connected / Display in MUTE mode
Flashes	No Ethernet connection available
Lights	Ethernet connection available

Yellow Ethernet-LED

Off	No data transfer / Display in MUTE mode
Flashes	Data transfer takes place

RGB Status-LED

Off	Power supply not connected / Display in MUTE mode
RED lights	No Ethernet connection
GREEN lights	Device works normally
BLUE lights	Device is ready to switch to update mode
BLUE flashes	Device is in update mode
RED / GREEN in rotation	The device is waiting for DHCP-IP-Address assignment
RED / GREEN / BLUE in rotation	RDM Identify or Art-Net Locate is signaled

Device Settings with Web-Interface

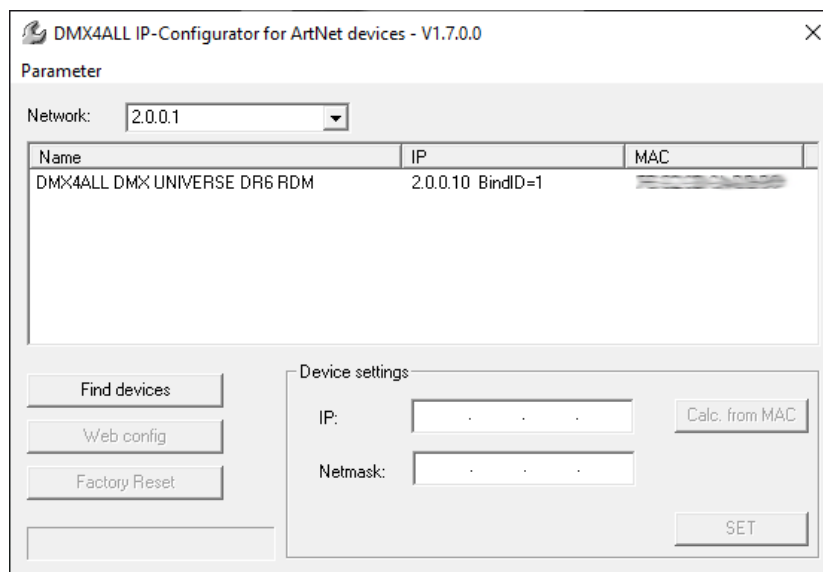
The device settings of the **DMX UNIVERSE DR6 RDM** occur via a web interface, which can be called up via any web browser.

Before calling the web interface, the IP of the DMX UNIVERSE DR6 RDM must match to the existing network. The IP can be set via the IP configurator or the PC must be set to the ArtNet network.

Set IP via IP-Configurator

The **IP Configurator** allows setting the IP address and the net-mask even if the network setting of the PC is not in the IP range of the DMX UNIVERSE DR6 RDM.

- Install the IP-Configurator
- Connect the DMX UNIVERSE DR6 RDM with the network and turn it on
- Start the software IP-Configurator



- The DMX UNIVERSE DR6 RDM is shown in the list
- Select entry (click)
- Enter the new IP and net mask
- Click SET

Set IP of the PC

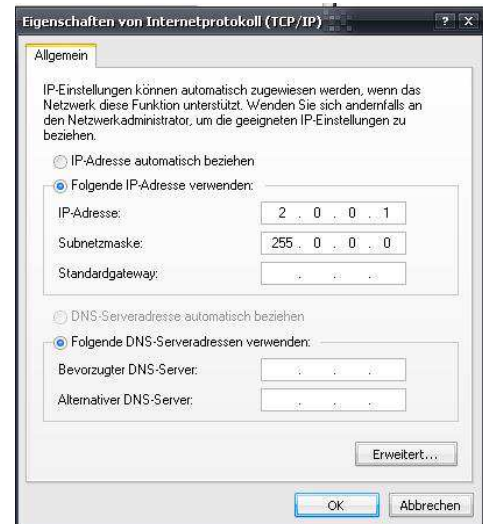
Within the delivery state of the DMX UNIVERSE DR6 RDM, the assigned **IP-Address** is **2.0.0.10** used for the web interface.

Set the computers network card to this IP range, to access the IP address 2.0.0.10 via a 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 Settings

To get the following configuration page, the IP of the DMX UNIVERSE DR6 RDM must be called up via a web browser in the address bar (delivery state: 2.0.0.10):

DMX UNIVERSE DR6 RDM

Main Settings | DMX Settings | DMX Monitor | DMX Fader | Service

Main Settings

Network Settings

DHCP-Mode :

IP Address : *i*

Subnet Mask : *i*

Default Gateway : *i*

Short Name :

Long Name :

DMX4ALL Command Options

Protocol :

Port : *i*

Additional Functions

LED Auto OFF : ☐ *i*

Save

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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 !

The **Netmask** must be left at 255.0.0.0 according to the Art-Net™ specification.

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.

DMX4ALL Command Options

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

Additional Functions

The option **LED Auto OFF** turns off automatically the LED display at the DMX UNIVERSE DR 6 RDM after 5 minutes if an Ethernet connection exists throughout.

SAVE stores the configuration.

DMX Settings

The configuration page for the DMX settings can be accessed via the DMX Settings button:

DMX UNIVERSE DR6 RDM

Main Settings **DMX Settings** DMX Monitor DMX Fader Service

DMX Settings

DMX Port	Mode	Fail Action	RDM	Universe	Port	Subnet	Net	Merge Mode	Destination IP	Broadcast
1	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	0	0	0	0	HTP		
2	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	1	1	0	0	HTP		
3	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	2	2	0	0	HTP		
4	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	3	3	0	0	HTP		
5	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	4	4	0	0	HTP		
6	ArtNet to DMX	ALL OFF	<input checked="" type="checkbox"/>	5	5	0	0	HTP		

Additional Functions

ArtNet-Sync Option: ☐

4 Second Interval: ☒

Sequence Number: ☒

Save

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For each of the 6 DMX ports, the settings are made in the table.

The **Mode** setting sets the operating mode for each DMX connection (DMX port). Depending on the Mode setting, the DMX port works as a DMX output or DMX input.

DMX-Output

If “ArtNet to DMX” or “sACN to DMX” is selected for the mode, the corresponding DMX port is configured as a DMX output.

Fail Action sets the behavior in case of failure of the Artnet™ or sACN data.

NO SIGNAL	- no DMX signal is output
HOLD	- the last DMX data is retained
ALL ON	- all DMX channels are set to 255
ALL OFF	- all DMX channels are set to 0

RDM activates the RDM functionality.

The parameter **Universe** specifies which ArtNet universe should be accepted. This is also made up of the ArtNet parameters **Port**, **SubNet** and **Net**, which are automatically converted in the table.

The **Merge** setting can be set to LTP (Latest) for last change or HTP (Highest) for highest value.

DMX-Input

If “DMX to ArtNet” or “DMX to sACN” is selected for the mode, the corresponding DMX port is configured as a DMX input.

Fail Action sets the behavior when the DMX signal fails.

NO SIGNAL	- no data is sent
HOLD	- the last DMX data is retained
ALL ON	- all DMX channels are set to 255
ALL OFF	- all DMX channels are set to 0

The parameter **Universe** specifies which ArtNet universe should be output. This is also made up of the ArtNet parameters **Port**, **SubNet** and **Net**, which are automatically converted in the table.

Destination IP specifies the IP address to which the DMX data is sent via ArtNet or sACN.

Broadcast sends the DMX data to all devices in the network.

General Settings

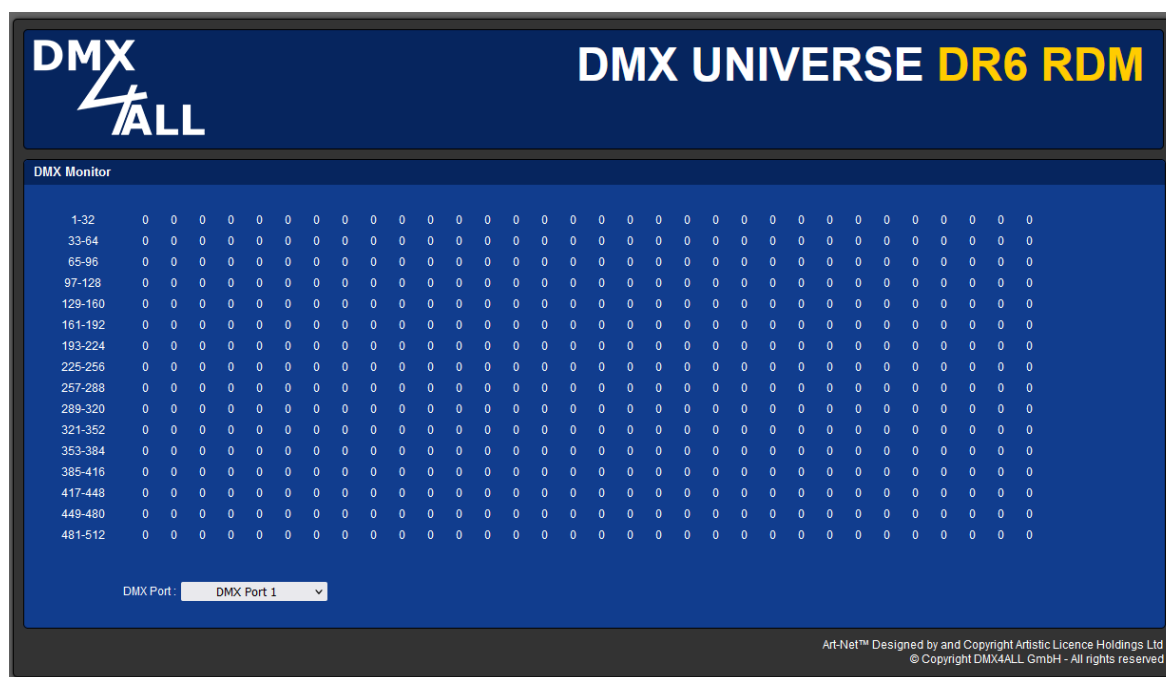
The **ArtNet-Sync** option synchronizes the DMX output.

The **4 Second Interval** option generates a DMX data packet after 4 seconds at the latest, even if no data is present at the DMX input.

The **Sequence Number** option generates a consecutive packet number for each DMX data packet (ArtDMX).

DMX-Monitor

The DMX monitor is accessed on a separate web page by clicking the DMX monitor button.

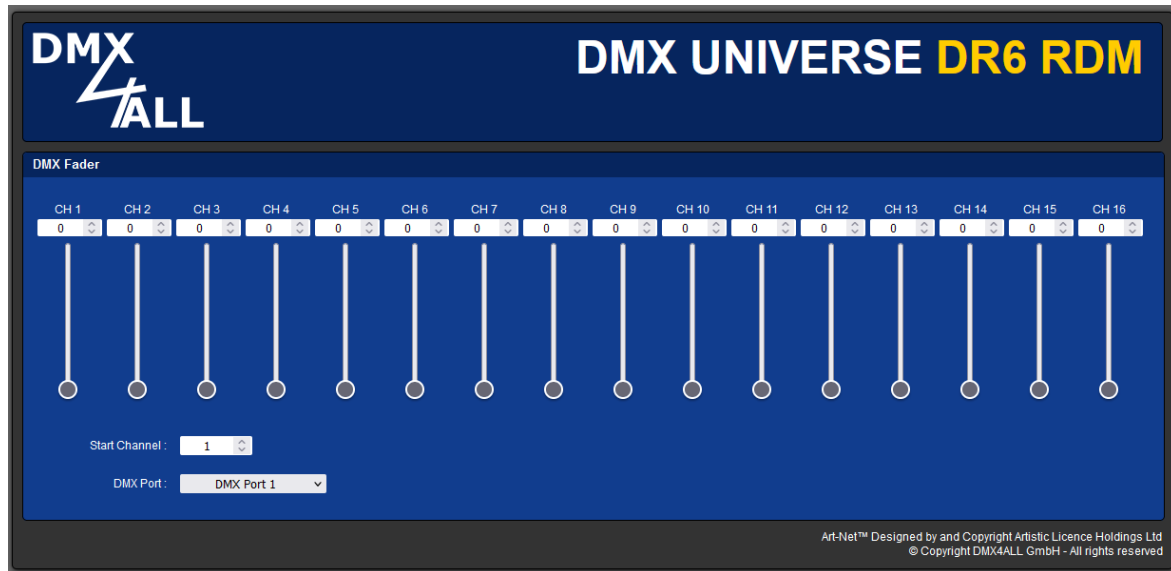


The current DMX values are displayed in decimal format (value range 0 to 255) for the selected DMX port.

The DMX data display is automatically updated every second.

DMX-Fader

The DMX fader is accessed on a separate web page by clicking the DMX fader button.



From the set start address (Start Channel), 16 sliders and input fields can be used to set the DMX value for the selected DMX port.

The DMX values are entered in decimal notation (value range 0 to 255).



Art-Net Data send to the DMX UNIVERSE DR6 RDM are prior used and an input via the DMX fader dialog is not possible.

Login for Web-Interface

The **DMX UNIVERSE DR6 RDM** offers the option to create a login for the web interface.

A **password** can be named on the service site under login options.
An empty password allows the access without password request.

The **User Name** is fixed, can't be changed and is always „Admin“.

The screenshot shows the DMX UNIVERSE DR6 RDM web interface. At the top, there is a navigation bar with the DMX 4ALL logo and the title "DMX UNIVERSE DR6 RDM". Below the navigation bar, there are tabs for "Main Settings", "DMX Settings", "DMX Monitor", "DMX Fader", and "Service". The "Service" tab is selected. Under the "Service" tab, there is a "Login Options" section with a "User Name" field containing "Admin", a "Password" field, and a "Confirm Password" field. Below this, there is a "Service Request" section with a "Code" field and a "Send" button. A list of service codes is provided: 1379 to start Firmware-Update, 7319 to set the device to factory defaults, and 7931 to reboot the device. A "Save" button is located at the bottom right of the "Service Request" section. At the bottom of the page, there is a copyright notice: "Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd © Copyright DMX4ALL GmbH - All rights reserved".

If a password is defined, it will be queried to get the web surface.

The screenshot shows a "User Login" dialog box. It has a "User Name" field containing "Admin", a "Password" field, and a "Login" button.

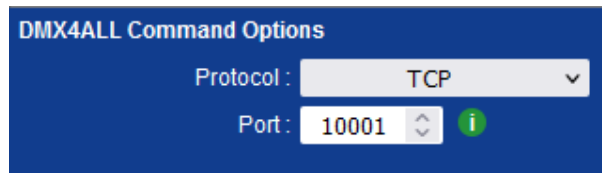


If a password is assigned and is no longer known, a factory reset must be executed to reset and renew the password. In this case, all settings are also reset to the delivery state!

DMX4ALL-Command

The **DMX UNIVERSE DR6 RDM** has a further communication interface, using DMX4ALL-Commands.

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



The image shows a screenshot of a software window titled "DMX4ALL Command Options". It has a dark blue background. Inside, there are two settings: "Protocol" and "Port". The "Protocol" is set to "TCP" in a dropdown menu. The "Port" is set to "10001" in a text box with up and down arrows, and a green information icon to its right.

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.

Factory Reset

The **DMX UNIVERSE DR6 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 DR6 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 DR6 RDM** from list
- Click **FACTORY RESET**
- Now, the Reset will be executed

Firmware-Update

The **DMX UNIVERSE DR6 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 DR6 RDM** from list
- Click *Firmware-Update*
- Select firmware file (.bin) and confirm
- Wait until the update has finished (Entry *RUN application.* appears)

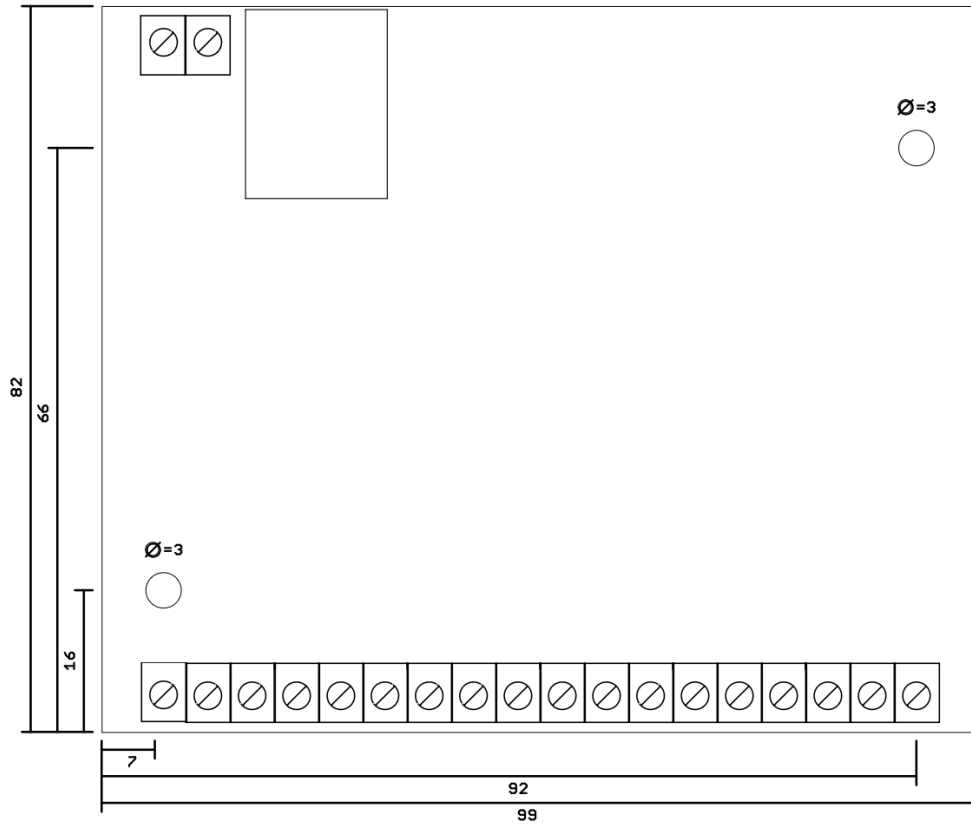
Activate firmware update via web browser (older units):

- 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 DR6 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.

Dimension



All details in mm

Accessories

Top hat rail housing 350



Power supply 12V



Net work cable



Revision History

Firmware V1.00

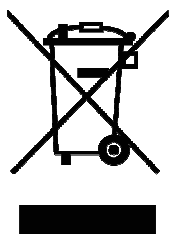
- First release

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. Conformance to the best available technology the following risks should not be 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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