

  
STAIRVILLE

D610H, D610H MKII,  
D610S, D610T

dimmer pack

Musikhaus Thomann  
Thomann GmbH  
Hans-Thomann-Straße 1  
96138 Burgebrach  
Germany  
Telephone: +49 (0) 9546 9223-0  
E-mail: [info@thomann.de](mailto:info@thomann.de)  
Internet: [www.thomann.de](http://www.thomann.de)

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# 1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under [www.thomann.de](http://www.thomann.de).

## 1.1 Further information

On our website ([www.thomann.de](http://www.thomann.de)) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

## 1.2 Notational conventions

This manual uses the following notational conventions:

### Letterings

The letterings for connectors and controls are marked by square brackets and italics.

**Examples:** *[VOLUME]* control, *[Mono]* button.



### Displays

Texts and values displayed on the device are marked by quotation marks and italics.

**Examples:** *'24ch'*, *'OFF'*.

## 1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
<b>DANGER!</b>	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
<b>NOTICE!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

## 2 Safety instructions

### **Intended use**

This appliance is designed for professional use only and is intended to be used to control the brightness of connected spotlights. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.



**Safety****DANGER!****Danger for children**

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

**DANGER!****Electric shock caused by high voltages inside**

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

Do not use the device if covers, protectors or optical components are missing or damaged.



**DANGER!**

**Hazardous voltage**

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

By all means you have to observe all electrical safety instructions applicable at the place of operation.



**DANGER!**

**Electric shock caused by short-circuit**

Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



**NOTICE!**

**Risk of fire**

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.



**NOTICE!**

**Operating conditions**

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.



### **NOTICE!**

#### **Power supply**

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

## 3 Features

### General features

- 6 dimmer channels
- Digital control system
- Control via DMX 512
- Preheat, dimmer curve and maximum voltage can be adjusted individually
- Indicators for temperature and operation
- Test function
- Intelligent cooling control, large cooling ribs
- Single channel fuse (10 A)
- Made in Europe

### Device-specific features

#### **D610H (item no. 163737)**

- Output: 1 × industrial multi-pin connector, 16 pins
- Voltage supply via CEE plug (32 A)

#### **D610H MKII (item no. 190914)**

- Outputs: 2 × industrial multi-pin connector, 16 pins
- Voltage supply via CEE plug (32 A)

#### **D610S (item no. 171141)**

- Outputs: 6 × outlets with hinged lid
- Voltage supply via CEE plug (32 A)

#### **D610T (item no. 327885)**

- Outputs: 2 × screw terminal blocks
- Voltage supply via three-phase screw terminal block (32 A)

## 4 Installation and starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

The device is designed for mounting in 19" racks, it occupies two rack units (RU).

First, connect the loads to the terminals on the back of the device. Establish the DMX link to the controller. Finally, connect the mains power plug of the unit to a 32 A CEE socket (D610H, D610H MKII, D610S) or connect the device via the three-phase phoenix-terminal to the power supply (D610T).

Connection options for blocks L1, L2 and L3 (D610T):

- one block per phase
- one block to one phase, two blocks to a second phases
- all blocks to one phase

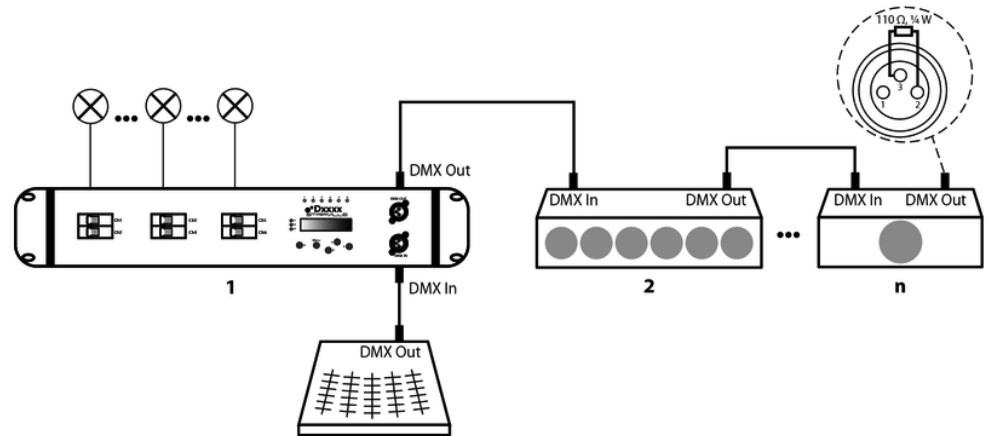


*Regardless of the actual use, all three blocks should always be connected.*



**Connections in 'DMX' mode**

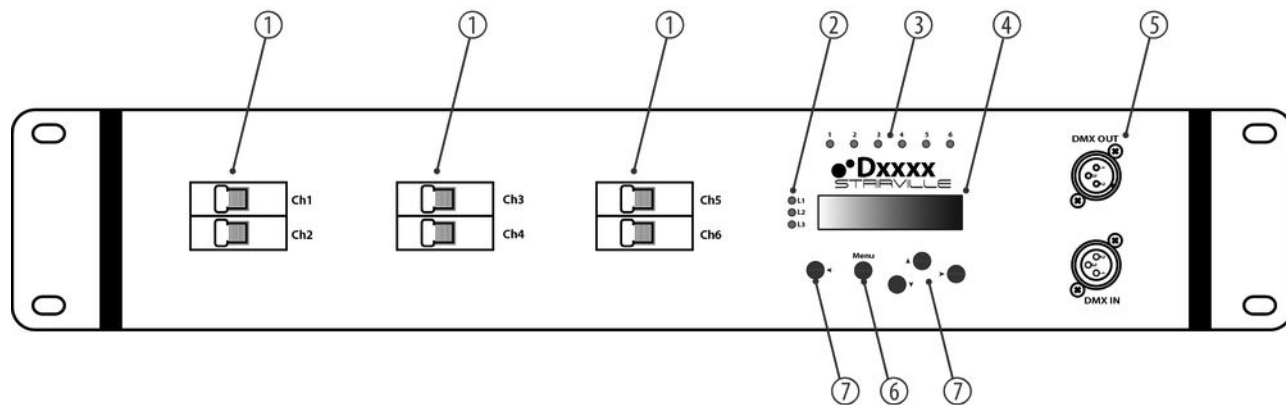
Connect the DMX input of the device to the DMX output of a DMX controller or other DMX device. Connect the output of the first DMX device to the input of the second one and so on, to form a series connection. Make sure that the output of the last DMX device in the chain is terminated by a resistor (110  $\Omega$ , 1/4 W).



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## 5 Connections and operating elements

Front panel D610H, D610H MKII,  
D610S, D610T

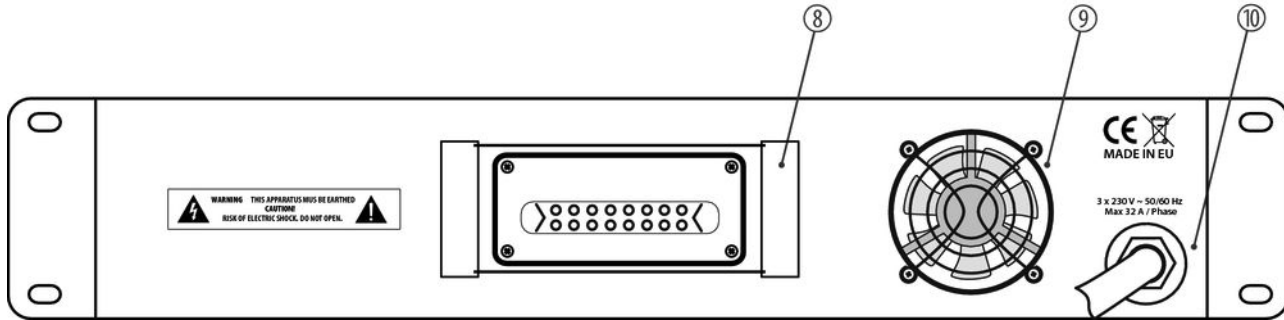


1	<i>[Ch1]...[Ch6]</i> Circuit breakers for channels 1...6, arranged in three blocks (L1...L3). With the circuit breakers, the desired channels are being activated ( <i>[I - ON]</i> ) or deactivated ( <i>[O - OFF]</i> ).
2	<i>[L1]...[L3]</i> Voltage indicators of blocks L1...L3. The LEDs of the connected blocks light red as soon as mains power is applied to the device.
3	<i>[1]...[6]</i> Voltage indicators of channels 1...6. The LEDs of active channels light solid green during operation.
4	Display.
5	<i>[DMX IN]   [DMX OUT]</i> DMX input, DMX output.

6	<i>[Menu]</i> Button to open the main menu and confirm display values.
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7	Navigation buttons Buttons to navigate the device menu.
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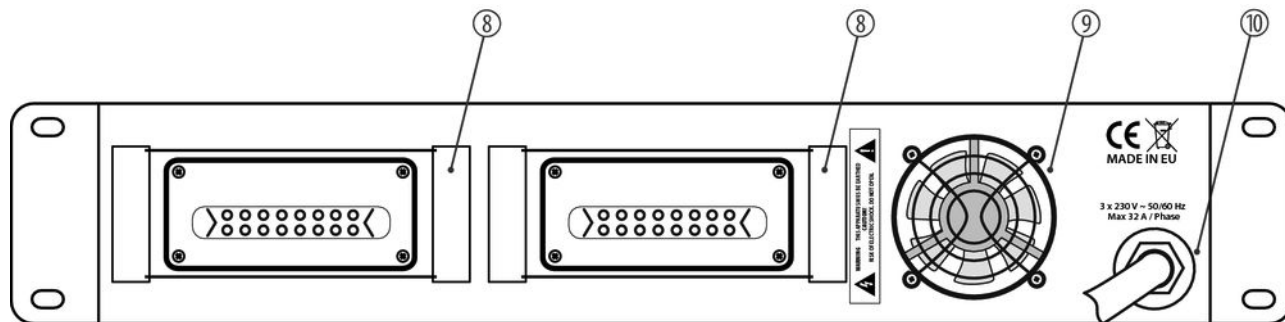
Rear panel D610H



- |    |  |
|----|--|
| 8  | Dimmer output, 16-pin Harting industrial connector (note the device label when connecting the cables). |
| 9  | Fan.   |
| 10 | Power cord with 5-pin CEE plug (32 A, 3 × 230 V).  |

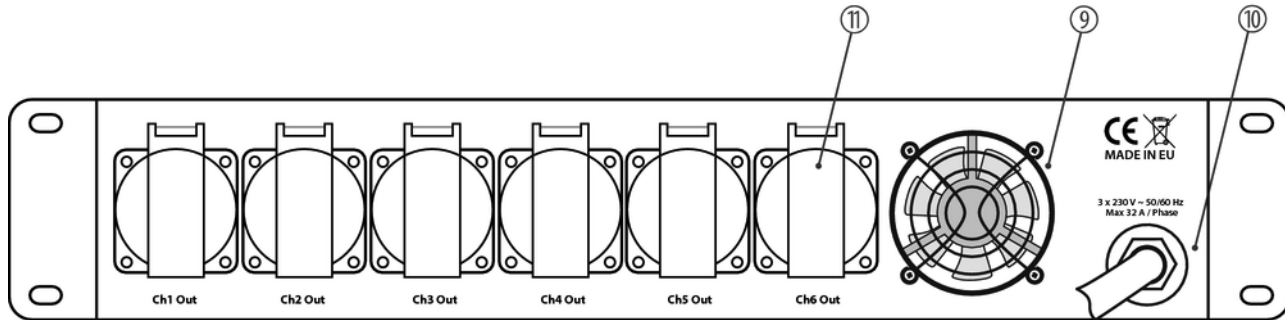
D610H, D610H MKII, D610S, D610T

### Rear panel D610H MKII



- |    |  |
|----|--|
| 8  | Dimmer outputs, 2 × 16-pin Harting industrial connectors (note the device label when connecting the cables). |
| 9  | Fan.   |
| 10 | Power cord with 5-pin CEE plug (32 A, 3 × 230 V).  |

Rear panel D610S



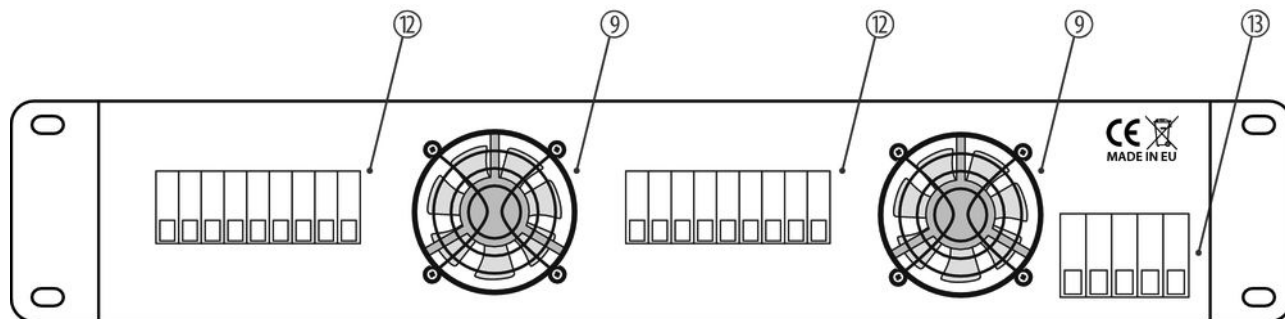
9 Fan.

10 Power cord with 5-pin CEE plug (32 A, 3 × 230 V).

11 Dimmer outputs, 6 × outlets with hinged lid.

D610H, D610H MKII, D610S, D610T

### Rear panel D610T



- |    |   |
|----|---|
| 9  | Fan.  |
| 12 | Dimmer outputs, 2 × screw terminals (note the device label when connecting the cables). |
| 13 | Power connector (screw terminals), 3-phase (32 A, 3 × 230 V).                           |



## 6 Operating

### Turning on and off

Once you connect the device to the power supply, the LEDs of the connected blocks light red. Turn on the required channels via the associated circuit breakers (LEDs of active channels light up green).

To switch off, disconnect the power plug from the 32-A-CEE outlet.



#### **DANGER!**

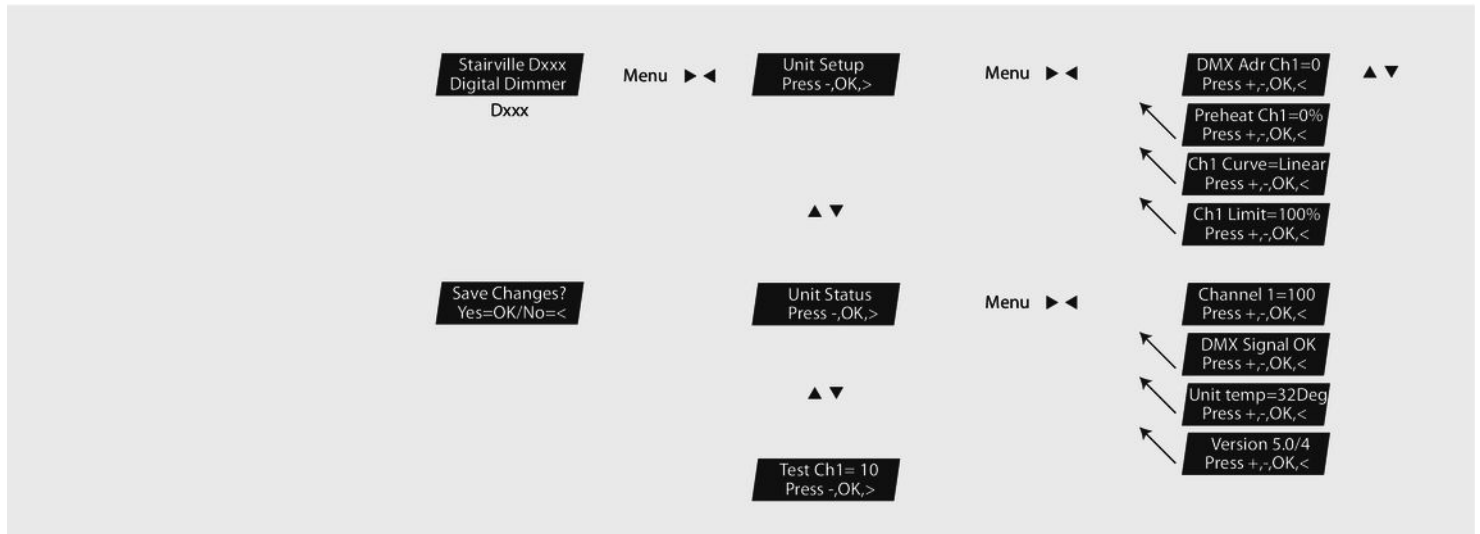
#### **Hazardous voltage**

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

By all means you have to observe all electrical safety instructions applicable at the place of operation.

### Menu overview



## Setting the dimmer curve

The device can be operated in dimmer mode (Linear, Sqrt, Exp1, Exp2) or in Switch mode ('Off' to DMX 80, 'On' from DMX 160).

Proceed as follows to adjust the dimmer curve:

1. ▶ Open the menu 'Unit Setup', 'Ch Curve' (see menu overview).
2. ▶ Confirm with the [Menu] button.
  - ⇒ The channel number display flashes.
3. ▶ Select the desired channel with the navigation buttons ▲ or ▼.
4. ▶ Use the navigation button ► to change to the curve value.
  - ⇒ The displayed value flashes.
5. ▶ Select the desired setting with the navigation buttons ▲ or ▼.
6. ▶ Press the [Menu] button.
  - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7. ▶ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

### Setting the maximum voltage

The device offers the possibility to limit the maximum voltage for each channel, for example, to extend the life of the illuminants used.

Proceed as follows to adjust the maximum voltage:

1. ▶ Open the menu 'Unit Setup', 'Limit Ch 1=100' (see menu overview).
2. ▶ Confirm with the [Menu] button.
  - ⇒ The channel number display flashes.
3. ▶ Select the desired channel with the navigation buttons ▲ or ▼.
4. ▶ Use the navigation button ▶ to change to the voltage value.
  - ⇒ The displayed value flashes.
5. ▶ Adjust the value using the navigation buttons ▲ or ▼.
6. ▶ Press the [Menu] button.
  - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7. ▶ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

## Setting the preheat

The preheat can be adjusted in a range from 0...50, where a value of 50 corresponds to approx. 20 %.

In Switch mode ('Off' to DMX 80, 'On' from DMX 160), this function is not available.

Proceed as follows to adjust the preheat:

1. ➤ Open the menu 'Unit Setup', 'Preheat Ch1 = 0' (see menu overview).
2. ➤ Confirm with the [Menu] button.
  - ⇒ The channel number display flashes.
3. ➤ Select the desired channel with the navigation buttons ▲ or ▼.
4. ➤ Use the navigation button ► to change to the preheat value.
  - ⇒ The displayed value flashes.
5. ➤ Adjust the value using the navigation buttons ▲ or ▼.
6. ➤ Press the [Menu] button.
  - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7. ➤ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

### Setting the DMX address

Proceed as follows to set the DMX address:

- 1.** ▶ Open the menu 'Unit Setup', 'DMX Addr Ch 1 =01' (see menu overview).
- 2.** ▶ Confirm with the [Menu] button.
  - ⇒ The channel number display flashes.
- 3.** ▶ Select the desired channel with the navigation buttons ▲ or ▼.
- 4.** ▶ Use the navigation button ▶ to change to the set DMX address.
  - ⇒ The displayed value flashes.
- 5.** ▶ Adjust the value using the navigation buttons ▲ or ▼.
- 6.** ▶ Press the [Menu] button.
  - ⇒ The display shows the confirmation prompt 'Save Changes?'.
- 7.** ▶ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.



*When setting channel 1, the following channels are automatically addressed consecutively. This addressing may be adjusted as described above.*

## Test mode

In Test mode, you can check the individual channels.

- 1.** ▶ Open the menu 'Test Ch 1=0' (see menu overview).
- 2.** ▶ Confirm with the [Menu] button.
  - ⇒ The channel number display flashes.
- 3.** ▶ Select the desired channel with the navigation buttons ▲ or ▼.
- 4.** ▶ Change with the navigation buttons ▶ and ◀ between channel number and channel value.
- 5.** ▶ Press the [Menu] button to exit Test mode.
  - ⇒ The display shows the confirmation prompt 'Save Changes?'.
- 6.** ▶ Confirm the prompt with [Menu] to save the changed settings.

### Channel value display

Proceed as follows to display the channel values:

1. ▶ Open the menu *'Unit Setup'*, *'Channel 1= 68'* (see menu overview).
2. ▶ Confirm with the *[Menu]* button.  
⇒ The channel number display flashes.
3. ▶ Select the desired channel with the navigation buttons ▲ or ▼.
4. ▶ Press the *[Menu]* button to exit the menu.

### Block temperature display

Open the menu *'Unit Status'*, *'Unit Temp=34Deg'* to display the block temperature (see menu overview).

Above a temperature of 45 °C, the internal fans will be switched on. The fan power will be increased continuously up to 100 % to a temperature of 65 °C. Above a temperature of 95 °C, the over-temperature protection responses and turns the block off. Then the display shows *'L...Overheat | Unit Overheated'*. Once the temperature has dropped back below 80 °C, the block is automatically reconnected.



**Checking DMX status**

To retrieve the DMX status, open the menu *'Unit Status'*, *'DMX Signal'* (see menu overview). When the signal is received correctly, the display will show *'DMX Signal OK'*. On a faulty signal, *'No DMX Signal'* appears. In this case, check the connecting cables and DMX settings on the device.

## 7 Technical specifications

		<b>D610H</b> Item no. 163737	<b>D610 MKII</b> Item no. 190914	<b>D610S</b> Item no. 171141	<b>D610T</b> Item no. 327885
Control principle		Leading edge phase control			
Input connections	Power supply	Three-phase connection, max. 32 A per phase			Three-phase screw terminal block (32 A)
	Signal input	DMX 512 via 3-pin XLR plug			
Output connections	Power supply	1 × 16-pin multi-pin industrial connector	2 × 16-pin multi-pin industrial connector	6 × outlets, 230 V	2 × screw terminal block
	Signal output	DMX 512 via 3-pin XLR socket			
Channel fuse	Circuit breaker (MCB) per channel				
	Trigger characteristic	C			
	Rated current	10 A			

		<b>D610H</b> Item no. 163737	<b>D610 MKII</b> Item no. 190914	<b>D610S</b> Item no. 171141	<b>D610T</b> Item no. 327885
	Number of pins	16-pin			
Power consumption		max. 13,800 W			
Operating supply voltage		AC 380 V ~ 50 Hz			
Degree of protection		IP66			
Installation		19", 2 RU			
Dimensions (W × H × D)		483 mm × 390 mm × 90 mm			
Weight		10.8 kg			
Ambient conditions	Temperature range	0 °C...40 °C			
	Relative humidity	50 %, non-condensing			

D610H, D610H MKII, D610S, D610T

## 8 Plug and connection assignment

### Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

### DMX connections



The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

## 9 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.





